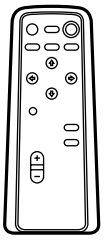
SERVICE MANUAL

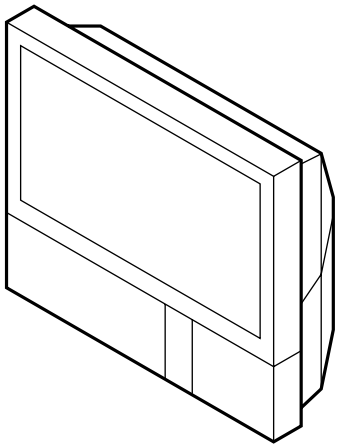
LJ-2T CHASSIS

MODEL	COMMANDER	DEST.	CHASSIS No.
KL-W7000	RM-Y980	US	SCC-N56B-A
KL-W7000	RM-Y980	Canadian	SCC-N56B-A

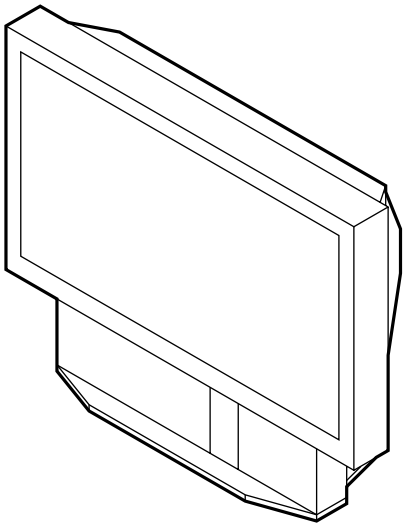
MODEL	COMMANDER	DEST.	CHASSIS No.
KL-W9000	RM-Y980	US	SCC-N56A-A
KL-W9000	RM-Y980	Canadian	SCC-N56A-A



RM-Y980



KL-W7000



KL-W9000

MICROFILM

* Please file according to model size...

37 50

LCD PROJECTION DATA MONITOR

SONY®

Specifications

Acceptable signal NTSC video signal, RGB signal (For details, see page **9**.)

Projection system 3 LCD panels, 1 lens projection system

LCD panel 1.35-inch TFT LCD panel
Approx. 1.54 million dots (512,880 pixels)
1068.5 × 480 dots × 3 panels

Lamp XL-100U: HID lamp, 100 W

Lens Large diameter hybrid lens F2.4

Screen size (measured diagonally)
KL-W7000: 37 inches (942 mm)
KL-W9000: 50 inches (1,272 mm)

Viewable image size (for RGB input)
KL-W7000: Approx. 36.3 inches (921 mm) (diagonally)
Approx. 803 × 452 mm (w/h)
KL-W9000: Approx. 49.1 inches (1247 mm) (diagonally)
Approx. 1087 × 611 mm (w/h)

Deflection frequency
Horizontal: 31.5–48 kHz
Vertical: 50–85 Hz

Inputs/outputs

VIDEO 1, 2 and 3 IN S VIDEO (VIDEO 1, 3 IN only) (4-pin mini-DIN):
Y: 1 Vp-p, 75 ohms unbalanced, sync negative
C: 0.286 Vp-p (burst signal), 75 ohms
VIDEO (phono jacks):
1 Vp-p, 75 ohms unbalanced, sync negative
AUDIO (phono jacks):
2 channels, 500 mVrms
Impedance: more than 47 kohms

VIDEO OUT S VIDEO (4-pin mini-DIN):
Y: 1 Vp-p, 75 ohms unbalanced, sync negative
C: 0.286 Vp-p (burst signal), 75 ohms
VIDEO (phono jacks):
1 Vp-p, 75 ohms unbalanced, sync negative
AUDIO (phono jacks):
2 channels, 500 mVrms
Impedance: less than 5 kohms

RGB 1, 2 IN VIDEO (D-sub 15-pin, female):
R, G, B: 0.7 Vp-p, positive, 75 ohms terminated
Sync on Green: 0.286 Vp-p
SYNC/HD: Composite sync: TTL, high impedance, sync positive/negative
Horizontal sync: TTL, high impedance, sync positive/negative
VD: Vertical sync: TTL, high impedance, sync positive/negative
AUDIO (RGB 1 IN) (phono jacks)
2 channels, 500 mVrms
Impedance: more than 47 kohms
AUDIO (RGB 2 IN) (stereo minijack)
500 mVrms
Impedance: more than 47 kohms

Power requirement
100 to 120 V AC, 50/60 Hz

Power consumption
190 W (MAX)
Standby mode: 2 W

Dimensions KL-W7000: 920 x 825 x 390 mm ($36\frac{1}{4} \times 32\frac{1}{2} \times 15\frac{3}{8}$ inches) (w/h/d)
KL-W9000: 1,228 × 1,055 × 565 mm ($48\frac{3}{8} \times 41\frac{5}{8} \times 22\frac{1}{4}$ inches) (w/h/d)

Mass KL-W7000: Approx. 30 kg (68 lbs 2 oz)
KL-W9000: Approx. 43 kg (106 lbs 8 oz)

Supplied accessories
Remote control RM-Y980 (1)
Size AA (R6) batteries (2)
AC power cord (1)
RGB signal cable (D-sub 15-pin ⟷ D-sub 15-pin) (1)
HD15-HD15 (male, without the No. 9 pin) adaptor (1)
Macintosh adaptor (1)
Windows 95 Monitor Information Disk (1)
Brackets (2)
Screws for brackets (2)
Buckle (1)
Hexagon head wrench (1)
Dust remover (1)

Optional accessories
Lamp unit XL-100U

Design and specifications are subject to change without notice.

SAFETY CHECK-OUT
(US Model only)

After correcting the original service problem, perform the following safety checks before releasing the set to the customer:

1. Check the area of your repair for unsoldered or poorly-soldered connections. Check the entire board surface for solder splashes and bridges.
2. Check the interboard wiring to ensure that no wires are "pinched" or contact high-wattage resistors.
3. Check that all control knobs, shields, covers, ground straps, and mounting hardware have been replaced. Be absolutely certain that you have replaced all the insulators.
4. Look for unauthorized replacement parts, particularly transistors, that were installed during a previous repair. Point them out to the customer and recommend their replacement.
5. Look for parts which, though functioning, show obvious signs of deterioration. Point them out to the customer and recommend their replacement.
6. Check the line cords for cracks and abrasion. Recommend the replacement of any such line cord to the customer.
7. Check the condition of the monopole antenna (if any). Make sure the end is not broken off, and has the plastic cap on it. Point out the danger of impalement on a broken antenna to the customer, and recommend the antenna's replacement.
8. Check the B+ and HV to see if they are specified values. Make sure your instruments are accurate; be suspicious of your HV meter if sets always have low HV.
9. Check the antenna terminals, metal trim, "metallized" knobs, screws, and all other exposed metal parts for AC Leakage. Check leakage as described below.

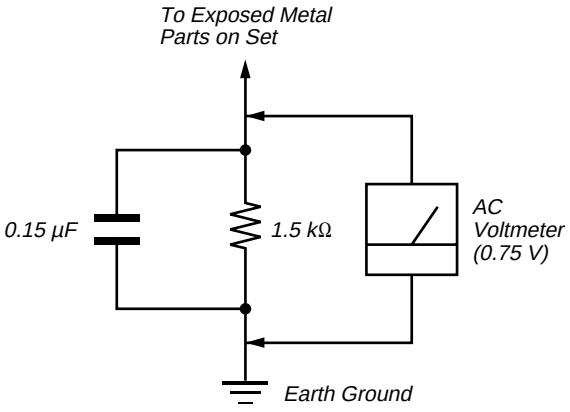


Fig. A. Using an AC voltmeter to check AC leakage.

LEAKAGE TEST

The AC leakage from any exposed metal part to earth ground and from all exposed metal parts to any exposed metal part having a return to chassis, must not exceed 0.5 mA (500 microampers). Leakage current can be measured by any one of three methods.

1. A commercial leakage tester, such as the Simpson 229 or RCA WT-540A. Follow the manufacturers' instructions to use these instruments.
2. A battery-operated AC milliammeter. The Data Precision 245 digital multimeter is suitable for this job.
3. Measuring the voltage drop across a resistor by means of a VOM or battery-operated AC voltmeter. The "limit" indication is 0.75 V, so analog meters must have an accurate low-voltage scale. The Simpson 250 and Sanwa SH-63Trd are examples of a passive VOMs that are suitable. Nearly all battery operated digital multimeters that have a 2 V AC range are suitable. (See Fig. A)

HOW TO FIND A GOOD EARTH GROUND

A cold-water pipe is guaranteed earth ground; the cover-plate retaining screw on most AC outlet boxes is also at earth ground. If the retaining screw is to be used as your earth-ground, verify that it is at ground by measuring the resistance between it and a cold-water pipe with an ohmmeter. The reading should be zero ohms. If a cold-water pipe is not accessible, connect a 60 – 100 watts trouble light (not a neon lamp) between the hot side of the receptacle and the retaining screw. Try both slots, if necessary, to locate the hot side of the line, the lamp should light at normal brilliance if the screw is at ground potential. (See Fig. B)

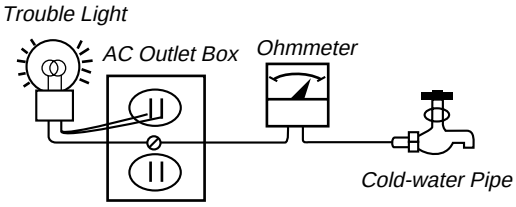


Fig. B. Checking for earth ground.

TABLE OF CONTENTS

SAFETY-RELATED COMPONENT WARNING!!
COMPONENTS IDENTIFIED BY SHADING AND MARK ⚠ ON THE SCHEMATIC DIAGRAMS, EXPLODED VIEWS AND IN THE PARTS LIST ARE CRITICAL TO SAFE OPERATION. REPLACE THESE COMPONENTS WITH SONY PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL OR IN SUPPLEMENTS PUBLISHED BY SONY.

ATTENTION AUX COMPOSANTS RELATIFS À LA SÉCURITÉ!!
LES COMPOSANTS IDENTIFIÉS PAR UNE TRAME ET UNE MARQUE ⚠ SONT CRITIQUES POUR LA SÉCURITÉ. NE LES REMPLACER QUE PAR UNE PIÈCE PORTANT LE NUMÉRO SPECIFIÉ. LES RÉGLAGES DE CIRCUIT DONT L'IMPORTANCE EST CRITIQUE POUR LA SÉCURITÉ DU FONCTIONNEMENT SONT IDENTIFIÉS DANS LE PRÉSENT MANUEL. SUIVRE CES PROCÉDURES LORS DE CHAQUE REMPLACEMENT DE COMPOSANTS CRITIQUES, OU LORSQU'UN MAUVAIS FONCTIONNE-MENT EST SUSPECTÉ.

The operating instructions mentioned here are partial abstracts from the Operating Instruction Manual. The page numbers of the Operating Instruction Manual remain as in the manual.

SECTION 1
GENERAL

Precautions

This projection monitor operates on extremely high voltage. To prevent fire or electric shock, please follow the precautions below.

On safety

- Operate the monitor only on 100 V to 120 V AC.
- One blade of the plug is wider than the other for safety purposes and will fit into the power outlet only one way. If you are unable to insert the plug fully into the outlet, contact your dealer.
- Should any liquid or solid object fall into the cabinet, unplug the monitor and have it checked by qualified personnel before operating it further.
- Unplug the monitor from the wall outlet if you are not going to use it for several days or more. To disconnect the cord, pull it out by the plug. Never pull the cord itself.
- The fans inside the monitor continue working for a while even after the monitor has been turned off. Do not unplug the monitor from the AC outlet while the fans are working.

On installation

- To prevent internal heat build-up, do not block the ventilation openings.
- Do not install the monitor in a hot or humid place, or in a place subject to excessive dust or mechanical vibration.

On screen

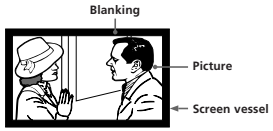
The screen surface is easily scratched. Do not rub, touch or tap it with sharp or abrasive objects.
Be especially careful when transporting the monitor.

On LCD panel

- Do not expose the screen to direct sunlight. It may damage the LCD panel.
- When the monitor is used in a cold place, the image may look lengthened. This is not a malfunction. The image will become normal when the temperature rises.
- When the same static picture has been displayed continuously, an afterimage impression of that picture may remain on the screen. This will disappear after a certain time.
- If you turn on the monitor immediately after power has been restored at an interruption, an LCD burn may occur. This is not a malfunction. The image will become normal after a certain time.

On blanking around the pciture

The monitor displays black masks between the picture and the screen vessel because the monitor under-scans to obtain the necessary space on the screen to display the picture. This is called blanking. Note that the black masks on each vessel are not uniform.
The blanking on the video picture will be wider to optimize picture.



On moisture condensation

If the projection monitor is transported directly from a cold to a warm location, or if the room temperature has changed suddenly, the picture may be blurred or show poor color. This is because moisture has condensed on the lenses inside. If this happens, let the moisture evaporate before using the monitor.

On cleaning

- Clean the cabinet of the monitor with a dry soft cloth. Stubborn stains may be removed with a cloth slightly dampened with solution of mild soap and water, then wipe it with a dry soft cloth.
  Do not use any type of solvent such as alcohol, benzine, thinner or insecticide. Such solvent may damage the finish of the monitor or erase the indications on the panel.
- Wipe the screen with a dust remover (supplied) occasionally, as the screen easily catches dust. The dust remover is washable. Wash it with warm water or mild detergent solution.
- Stubborn stains on the screen may be removed with a soft cloth slightly dampened with solution of mild soap and water.
- If the picture becomes dark after using the monitor for a long period of time, it may be necessary to clean the inside of the monitor. Consult qualified service personnel.

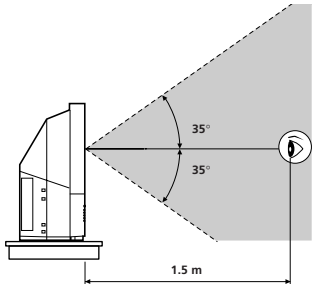
Step 1: Installing the projection monitor

Optimum viewing area

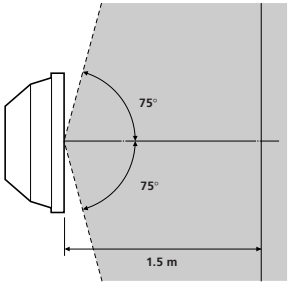
For the best picture quality, install the monitor within the areas shown below.

■ *for KL-W7000*

Vertical viewing area (side view)

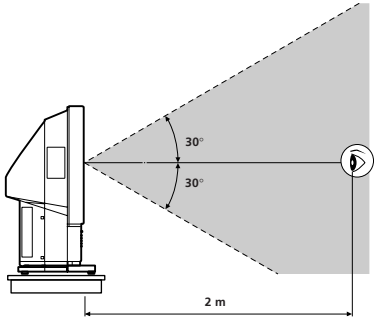


Horizontal viewing area (top view)

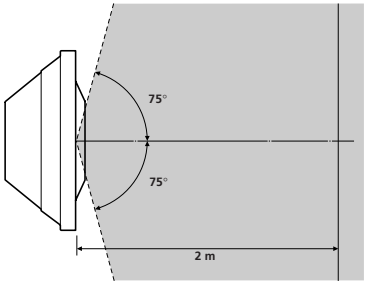


■ *for KL-W9000*

Vertical viewing area (side view)



Horizontal viewing area (top view)



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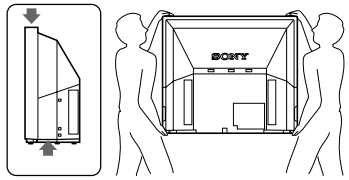
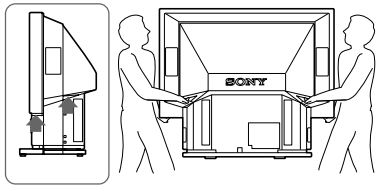
Carrying your monitor

Be sure to grasp the areas indicated by the arrows when carrying the monitor, and to use more than two people. Never grasp the front panel.

■ ***for KL-W7000***



■ ***for KL-W9000***

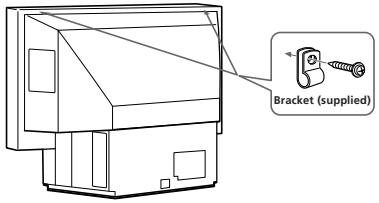


Stabilizing the monitor

Using the brackets

After setting up, secure the monitor to a wall, etc. with the supplied brackets.

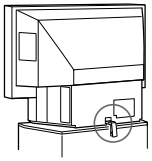
1 Mount the two supplied brackets with the screws to the upper rear sides of the monitor.



2 Pass a strong cord or a chain through each bracket mounted in step 1, and then secure it to a wall or a pillar, etc.

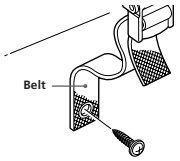
Using the buckle

You can also use the supplied buckle to secure the monitor to the stand.

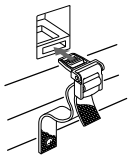


1 Attach the buckle to the stand on which the monitor is mounted.

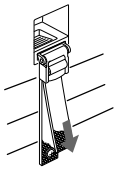
Tighten the supplied screw firmly.



2 Insert the buckle until it clicks.



3 Pull the belt to fasten.



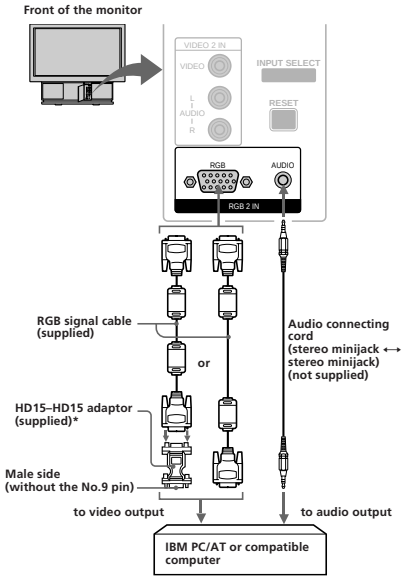
Step 2: Hookup

Before making the connection, turn off the power and disconnect the AC power cords of the monitor and the equipment to be connected. Refer to the instruction manual of the equipment you connect.

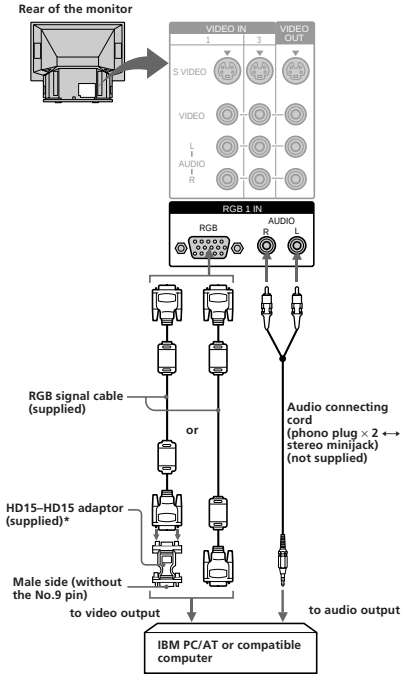
Connecting to an IBM PC/AT or compatible computer

Connect the RGB 2 IN connector on the front or the RGB 1 IN connector at the rear of the monitor to the video/audio outputs of the computer using the supplied RGB signal cable (D-sub 15 pin ⟷ D-sub 15 pin).

Using the front RGB 2 IN connector



Using the rear RGB 1 IN connector



* The HD15–HD15 adaptor (supplied) may be needed for some models. The male side (without the No. 9 pin) of the adaptor should be connected to the computer.

For customers using the supplied HD15–HD15 adaptor

This monitor uses a No. 9 pin in the video signal connector for DDC1 and DDC2B compatibility. Some PC systems which are not compatible with either DDC1 or DDC2B may not accept the No. 9 pin. If you are not sure whether your PC system accepts the No. 9 pin or not, use the HD15 (Female) – HD15 (Male without the No. 9 pin) adapter (supplied).

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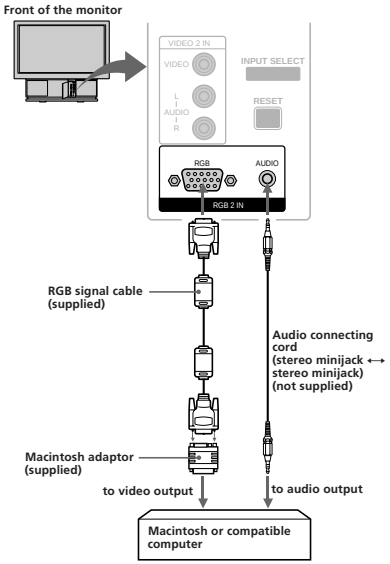
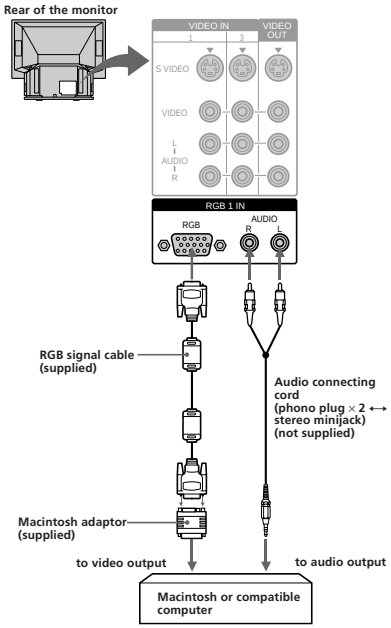
Connecting to a Macintosh or compatible computer

Connect the RGB 2 IN connector on the front or the RGB 1 IN connector at the rear of the monitor to the video/audio outputs of the computer using the supplied RGB signal cable (D-sub 15 pin ⟷ D-sub 15 pin) and the supplied Macintosh adaptor.

Using the front RGB 2 IN connector



Using the rear RGB 1 IN connector



About the supplied Macintosh adaptor

The supplied Macintosh adaptor is compatible with Macintosh LC, Performa, Quadra and Power Macintosh series computers. Macintosh II series and some version of PowerBook models may need an another adaptor with micro switches (not supplied).

Preset and user modes

Preset modes

The monitor has nine factory preset modes for the most popular industry standards as shown below.

No.	Resolution (dots × lines)	Horizontal frequency (kHz)	Vertical frequency (Hz)	Graphics mode
1	640 × 400	31.468	70.086	VGA mode (Text)
2	640 × 480	31.468	59.94	VGA mode (Graphics)
3	800 × 600	37.879	60.317	SVGA VESA
4	800 × 600	46.875	75.000	SVGA VESA
5	1024 × 768	48.363	60.004	VESA
6	864 × 480	31.469	59.94	Sony Wide-VGA*
7	1072 × 600	37.879	60.317	Sony Wide-SVGA*
8	1376 × 768	48.363	60.004	Sony Wide-XGA*
9	640 × 480	34.954	66.667	Macintosh 13" color

* For the timing chart of the signals, see page **28**.

User modes

When using a video mode that is not one of the preset modes, some fine tuning may be required to optimize the display to your preference. Simply adjust the monitor according to the adjustments instructions on page **16**. The adjustments will be stored automatically and recalled whenever that mode is used.
A total of 15 user-defined modes can be stored in memory. If a 16th mode is entered, it will replace the first.

Recommended horizontal timing conditions

Horizontal sync width should be more than 1.0 µsec.
Horizontal blanking width should be more than 3.6 µsec.

When "OUT OF SCAN RANGE" appears on the screen

The monitor receives a signal whose frequency range is not within that specified for the monitor.

Notes

- When projecting a Wide-VGA, Wide-SVGA or Wide-XGA signal, set the picture mode to FULL. In NORMAL mode, the picture with aspect ratio 16:9 will be compressed to aspect ratio 4:3 and appear lengthened vertically. For details, see page **15**.
- The monitor does not accept an interlace mode signal.

Plug & Play

This monitor complies with the DDC™1 and DDC2B which are the Display Data Channel (DDC) standards of VESA.
When a DDC1 host system is connected, the monitor synchronizes with the V. CLK in accordance with the VESA standards and outputs the EDID (Extended Display Identification Data) to the data line.
When a DDC2B host system is connected, the monitor automatically switches to each communication.

For customers using Windows 95

Install the new model information from the "Windows 95 Monitor Information Disk" into your PC. (To install the file, refer to the supplied "About the Windows 95 Monitor Information Disk/File.")
This monitor complies with the "VESA DDC" Plug&Play standard. If your PC/video card complies with DDC, select "Plug and Play Monitor (VESA DDC)" as "Monitor type" from "Control Panel" in Windows 95. Some PC/video cards do not comply with DDC. Even if your computer complies with DDC, it may have some problems connecting with this monitor. In this case, select this monitor's model name (KL-W7000 or KL-W9000) as "Monitor type" in Windows 95.

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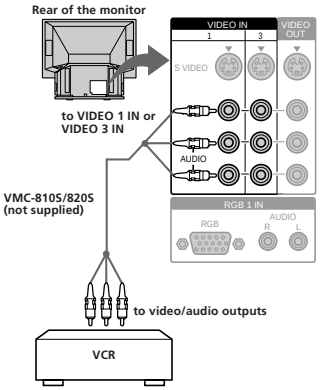
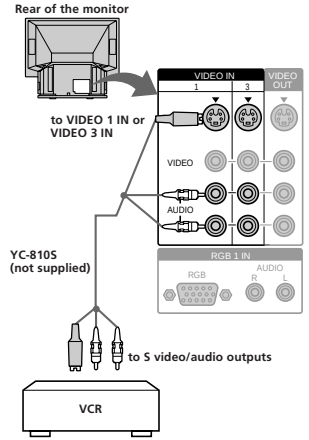
Connecting to video equipment

To a VCR not equipped with an S video connector



You can also use the VIDEO 2 IN jacks on the front of the monitor for the video/audio connections.

To an S video equipped VCR



Note

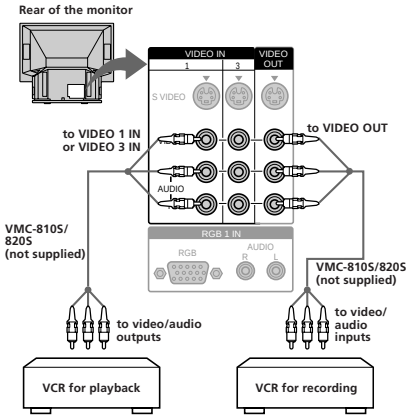
When you connect the cable to both the VIDEO jack and the S VIDEO connector, the picture from the S VIDEO connector is displayed on the monitor screen.

Connecting two VCRs for editing

The monitor outputs signals from the VIDEO IN jacks through the VIDEO OUT jacks. With two VCRs connected to the VIDEO IN and VIDEO OUT jacks, you can edit the tape.

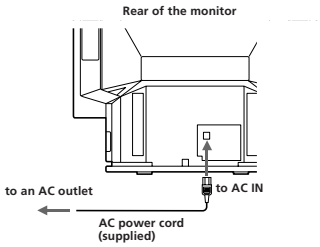
Note

For the RGB signal input from the RGB 1/2 IN connectors, the monitor outputs only the audio signal.



Connecting the AC power cord

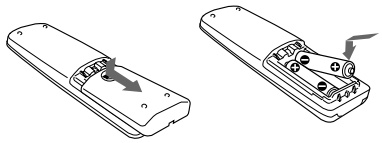
Connect the supplied power cord to the AC IN socket of the monitor and to a wall AC outlet.



Step 3: Setting up the remote control

Inserting batteries

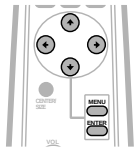
Insert two size AA (R6) batteries (supplied) by matching the + and – on the battery to the diagram inside the battery compartment.



Notes

- Under normal conditions, batteries will last up to six months. If the remote control does not operate properly, the batteries may be worn out. When replacing batteries, replace both of them with new ones.
- Do not mix old batteries with new ones or mix different types of batteries together.
- If the electrolyte inside the battery should leak, wipe the contaminated area of the battery compartment with a cloth and replace the old batteries with new ones. To prevent the electrolyte from leaking, remove the batteries when you don't plan to use the remote control for a long period of time.
- Do not handle the remote control roughly. Do not drop it, step on it, or let it get wet.
- Do not place the remote control in direct sunlight, near a heater, or where the humidity is high.

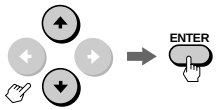
Changing the menu language



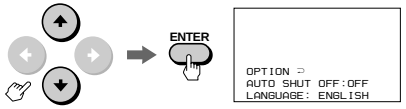
If you prefer Spanish or French to English, you can change the menu language.

1 Press MENU.

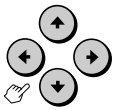
2 Press ↑ or ↓ to select OPTION, and press ENTER.



3 Press ↑ or ↓ to select LANGUAGE, and press ENTER.



4 Press ←, ↑, ↓ or → to select your favorite language, "ENGLISH," "FRANCAIS (French)" or "ESPANOL (Spanish)."



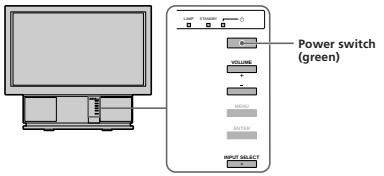
5 Press MENU to return to the original screen.

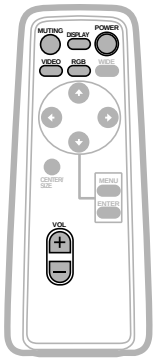
Notes

- You can operate the menu using the buttons on the monitor. The VOLUME + button functions the same as ↑ and →, and VOLUME – as ↓ and ←.
- You cannot use the AUTO SHUT OFF function for the input from VIDEO IN. (See page **22**.)

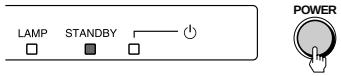
EN

Projecting the picture





1 If the STANDBY indicator on the front of the monitor is lit in orange, press POWER on the remote control to turn on the power.



Press the power switch (green) on the monitor if the STANDBY indicator is not lit.

The green ⏻ (power) indicator flashes, then lights up.

2 Turn on the power of the connected equipment.

3 Press RGB or VIDEO to select the input you want to watch.

The selected input indication is displayed on the screen.

To watch a computer picture input from the RGB IN connector

Each time you press RGB, the display changes as follows:

RGB 1 ⟷ RGB 2

To watch a video picture input from the VIDEO IN jacks

Each time your press VIDEO, the display changes as follows:

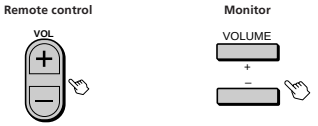
VIDEO 1 → VIDEO 2 → VIDEO 3

You can also select the input by pressing INPUT SELECT on the monitor.
Each time you press INPUT SELECT, the display changes as follows:

RGB 1 → RGB 2 → VIDEO 1 → VIDEO 2 → VIDEO 3

The input signal indication will automatically disappear.

4 Press VOL +/– (VOLUME +/–) to adjust the volume.



To turn off the monitor

Press POWER on the remote control. The monitor enters standby mode and the STANDBY indicator lights up. To turn off the main power, press the power switch (green) on the monitor.

Note

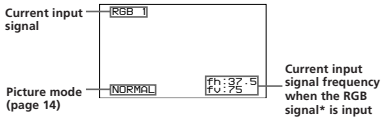
To protect the lamp mounted as a source of light, if you try to turn on the power within about 30 minutes after the power has been turned off, the ⏻ (power) indicator flashes and the picture does not appear.

Muting the sound

Press MUTING.
"MUTING" appears on the screen.
To restore the sound, press MUTING again, or press VOL+.

Displaying on-screen information

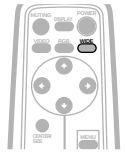
Press DISPLAY to display the following information on the screen.



***fH: Horizontal frequency**
fV: Vertical frequency
"OUT OF SCAN RANGE" appears if the scanning frequency range is not within the acceptable limits. (See page 9.)

To make the on-screen information disappear, press DISPLAY again.

Watching the picture in wide picture mode



Watching the video picture in wide mode

You can enjoy a variety of wide mode picture.

Press WIDE until the mode you want appears on the screen.

Each time you press WIDE, the mode changes as follows:

NORMAL → FULL → ZOOM → SUB TITLE → WIDE ZOOM

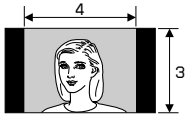
(continued)

EN

Recommended picture mode

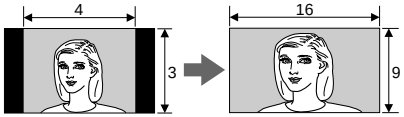
When watching a picture with normal aspect ratio 4:3

Select NORMAL.



The picture with normal ratio 4:3 is displayed as it is.

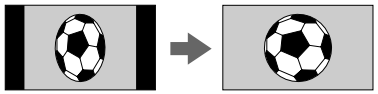
Select WIDE ZOOM.



The picture is enlarged horizontally and vertically and the upper and lower portions of the picture are compressed to the screen size.

When watching a picture recorded after a 16:9 picture has been compressed to aspect ratio 4:3

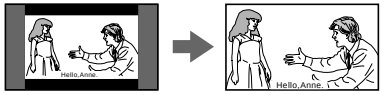
Select FULL.



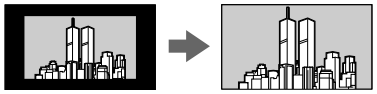
The picture compressed to aspect ratio 4:3 is enlarged horizontally to the screen size.

When watching a wide-format movie or software with black bands and subtitles (with subtitles inside the picture)

Select ZOOM.



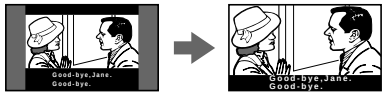
The wide-format picture is enlarged horizontally and vertically to the screen size.



The picture with aspect ratio 16:9 is enlarged to the screen size as it is.

When watching a movie or software with subtitles (with subtitles outside the picture)

Select SUB TITLE.



The wide-format picture is enlarged and the subtitle area is compressed so that the picture is aligned with the screen size.

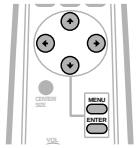
Note

- You can also change the picture mode by using the menu.

Notes on wide picture modes

- Select a picture mode taking into account that one which changes the aspect ratio of the original picture will provide an appear different from that of the original image.
- If the monitor is used for profit or for public viewing, modifying the original picture by changing picture modes may constitute an infringement of the rights of authors or producers which are legally protected by laws.
- When a normal 4:3 picture is watched in WIDE ZOOM mode, the surrounding portions may be cut off or modified. The original picture can be viewed in NORMAL mode.

Adjusting the vertical position of the video picture



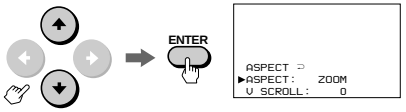
You can scroll the picture up or down when:

- the upper or lower portions of the picture in WIDE ZOOM mode are cut off.
- you want to move the picture in ZOOM mode as you like.
- subtitles are lost from the screen in SUB TITLE mode.

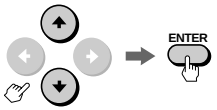
Scrolling the picture functions on the WIDE ZOOM, ZOOM and SUB TITLE modes only.

1 Press MENU.

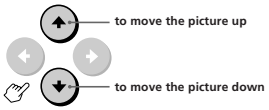
2 Press ↑ or ↓ to select ASPECT, and press ENTER.



3 Press ↑ or ↓ to select V SCROLL, and press ENTER.



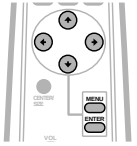
4 Press ↑ or ↓ to adjust the vertical position of the picture.



Note

- You can operate the menu using the buttons on the monitor. The VOLUME + button functions the same as ↑ and →, and VOLUME – as ↓ and ←.

Watching the computer picture in wide picture mode

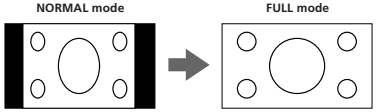


If you set the picture mode to FULL when a Wide-VGA, Wide-SVGA or Wide-XGA signal is received, you can watch the picture with aspect ratio 16:9 as it is. The Wide-VGA, Wide-SVGA and Wide-XGA signals are independently standardized by Sony. When you use the signals with the timing chart on page **28**, you can obtain an effective wide mode picture.

Press WIDE to display FULL or NORMAL on the screen.

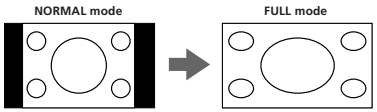
Each time your press WIDE, you can select FULL and NORMAL alternately.

When a Wide-VGA, Wide-SVGA or Wide-XGA signal is received



The picture with aspect ratio 16:9 is enlarged to the screen size.

When a conventional VGA, SVGA or XGA signal is received



The picture with aspect ratio 4:3 is enlarged horizontally to the screen size.

Adjusting the position of a computer picture

You can move the picture up, down, right or left to make it easy to watch by using the SIZE/CENTER button. For details, see page **16**.

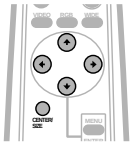
If you watch the Wide-VGA, Wide-SVGA or Wide-XGA signal in NORMAL mode

A 16:9 picture will be compressed horizontally to a 4:3 picture.

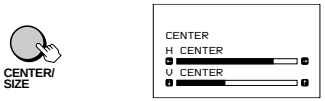
Adjusting the computer picture

Adjusting the position (CENTER)

After projecting the picture from a computer, you may need to adjust the position of the picture to fit the monitor screen. You can also move the picture as you like. The setting is only for the input signal displayed on the screen.



1 Press CENTER/SIZE until the CENTER adjustment screen appears.



2 Press ←, →, ↑ or ↓ to adjust the position.

For horizontal adjustment press ← or →. (H CENTER)

For vertical adjustment press ↑ or ↓. (V CENTER)

The CENTER adjustment screen automatically disappears after about 10 seconds if you do not press any button. You can also erase the CENTER adjustment screen by pressing CENTER/SIZE again.

To reset to the factory preset setting

Press RESET on the monitor. At the same time, the picture size and video/audio settings (pages **17** to **21**) are also reset to the factory preset levels.

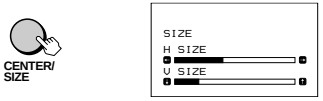
Note

- You can adjust the position by using the CENTER/SIZE and ←/↓/↑/→ buttons on the monitor.

Adjusting the picture size (SIZE)

After projecting the picture from a computer, you may need to adjust the picture size to fit the monitor screen. The setting is only for the input signal displayed on the screen.

1 Press CENTER/SIZE until the SIZE adjustment screen appears.



2 Press ←, →, ↑ or ↓ to adjust the picture size.

For horizontal adjustment press ← or →. (H SIZE)

For vertical adjustment press ↑ or ↓. (V SIZE)

The SIZE adjustment screen automatically disappears after about 10 seconds if you do not press any button. You can also erase the SIZE adjustment screen by pressing CENTER/SIZE again.

To reset to the factory preset setting

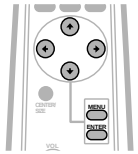
Press RESET on the monitor. At the same time, the picture position and video/audio settings (pages **17** to **21**) are also reset to the factory preset levels.

Notes

- For a picture with resolution of 640 × 350, 640 × 400 or 640 × 480, the vertical size cannot be increased from the size that was projected the first time.
- You can adjust the size using the CENTER/SIZE and ←/↓/↑/→ buttons on the monitor.

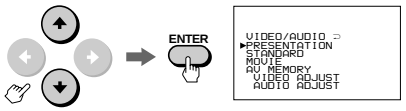
Selecting the preset picture viewing mode

The video/audio mode feature allows you to choose four different modes of picture/sound settings. Choose the one that best suits the type of program that you want to watch.

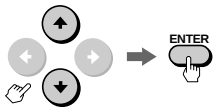


1 Press MENU.

2 Press ↑ or ↓ to select VIDEO/AUDIO, and press ENTER.



3 Press ↑ or ↓ to select the desired item, and press ENTER.



Choose	To
PRESENTATION	Watch the picture input from a computer.
STANDARD	Watch the picture input from video equipment.
MOVIE	Watch a movie.
AV MEMORY	Adjust the quality of the picture/sound to suit your taste. (For details, see pages **18–21**.)

4 Press MENU to return to the original screen.

To reset to the factory preset setting

Press RESET on the monitor.

When watching a computer picture, the mode resets to PRESENTATION. When watching a video picture, the mode resets to STANDARD. At the same time, the position and size of a computer picture (page **16**) are also reset to the factory preset levels. The settings in AV MEMORY do not reset.

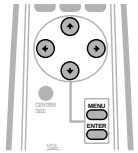
Note

- You cannot adjust the settings in modes other than AV MEMORY.

EN

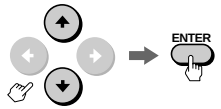
Adjusting the picture (AV MEMORY)

You can adjust the quality of the picture to suit you taste and store the settings into AV MEMORY.

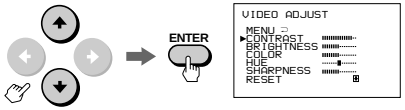


1 Press MENU.

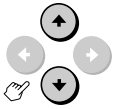
2 Press ↑ or ↓ to select VIDEO/AUDIO, and press ENTER.



3 Press ↑ or ↓ to select VIDEO ADJUST, and press ENTER.

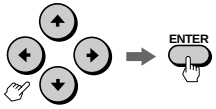


4 Select the item you want to adjust.
For example:
(1) To adjust the brightness, press ↑ or ↓ to move the cursor (▶) to BRIGHTNESS.



(2) Press ENTER.

5 Adjust the selected item.
Press ↑, →, ↓ or ← to adjust the item, and press ENTER.



Item	Press ↓ or ← to	Press ↑ or → to
CONTRAST	Decrease picture contrast.	Brighten the picture.
BRIGHTNESS	Darken the picture.	Brighten the picture.
COLOR	Decrease color intensity.	Increase color intensity.
HUE	Make picture tones become purplish.	Make picture tones become greenish.
SHARPNESS	Soften the picture.	Sharpen the picture.

6 To adjust other items, repeat steps 4 and 5.

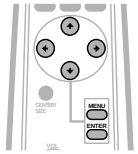
7 Press MENU to return to the original screen.

To reset to the factory preset setting
Move the cursor (▶) to RESET at the bottom of the VIDEO ADJUST menu, and press ENTER.

Notes
- When the RGB signal is input, COLOR, HUE and SHARPNESS cannot be adjusted.
- You can adjust the items in AV MEMORY for each input from VIDEO 1, 2 and 3, and RGB 1 IN and RGB 2 IN.
- You can operate the menu using the buttons on the monitor. VOLUME + functions the same as ↑ and →, and VOLUME – as ↓ and ←.

Adjusting the picture in more details

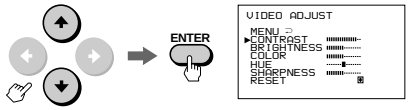
You can adjust the picture with the NR (noise reduction), H-WHITE and COLOR TEMP (temperature) options.



1 Press MENU.

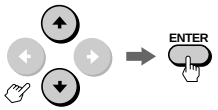
2 Press ↑ or ↓ to select VIDEO/AUDIO, and press ENTER.

3 Press ↑ or ↓ to select VIDEO ADJUST, and press ENTER.

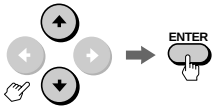


4 Press ↑ or ↓ to move the cursor (▶) to RESET, then press ↓ again.

5 Select the desired item with ↑ or ↓, then press ENTER.



6 Press ↑ or ↓ to adjust the item, then press ENTER.



Choose	To
NR (Noise Reduction)	Reduce picture noise. You can choose LOW or HIGH position.
H-WHITE	Emphasize the white color with the ON position.
COLOR TEMP (Color temperature)	Make the white color warm (reddish) with the LOW position. Make it cool (bluish) with the HIGH position.

7 To adjust other items, repeat steps 5 and 6.

8 Press MENU to return to the original screen.

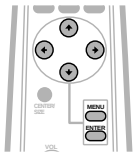
To reset to the factory preset setting
Move the cursor (▶) to RESET at the bottom of the VIDEO ADJUST menu, and press ENTER.

Notes
- You can adjust the items in AV MEMORY for each input from VIDEO 1, 2 and 3, and RGB 1 IN and RGB 2 IN.
- You can operate the menu using the buttons on the monitor. VOLUME + functions the same as ↑ and →, and VOLUME – as ↓ and ←.

EN

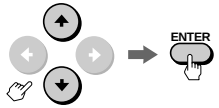
Adjusting the sound (AV MEMORY)

You can adjust the quality of the sound to suit you taste and store the settings into AV MEMORY.

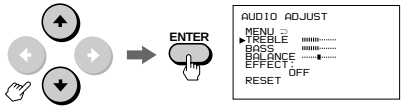


1 Press MENU.

2 Press ↑ or ↓ to select VIDEO/AUDIO, and press ENTER.

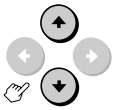


3 Press ↑ or ↓ to select AUDIO ADJUST, and press ENTER.



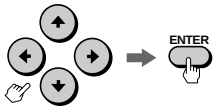
4 Select the item you want to adjust.
For example:

(1) To adjust the bass, press ↑ or ↓ to move the cursor (▶) to BASS.



(2) Press ENTER.

5 Adjust the selected item.
Press ↑, →, ↓ or ← to adjust the item, and press ENTER.



Item	Press ↓ or ← to	Press ↑ or → to
TREBLE	Decrease the treble response.	Increase the treble response.
BASS	Decrease the bass response.	Increase the bass response.
BALANCE	Emphasize the left speaker's volume.	Emphasize the right speaker's volume.

6 To adjust other items, repeat steps 4 and 5.

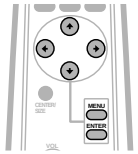
7 Press MENU to return to the original screen.

To reset to the factory preset setting
Move the cursor (▶) to RESET at the bottom of the AUDIO ADJUST menu, and press ENTER.

Notes
- You can adjust the items in AV MEMORY for each input from VIDEO 1, 2 and 3, and RGB 1 IN and RGB 2 IN.
- You can operate the menu using the buttons on the monitor. VOLUME + functions the same as ↑ and →, and VOLUME – as ↓ and ←.

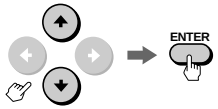
Selecting the audio effect (EFFECT)

Audio effect mode allows you to enjoy dynamic sound with surround-like effect.

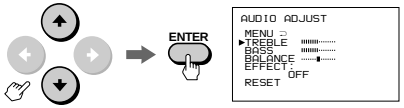


1 Press MENU.

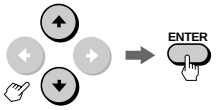
2 Press ↑ or ↓ to select VIDEO/AUDIO, and press ENTER.



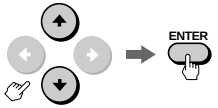
3 Press ↑ or ↓ to select AUDIO ADJUST, and press ENTER.



4 Press ↑ or ↓ to select EFFECT, and press ENTER.



5 Press ↑ or ↓ to select the desired item, and press ENTER.



Choose	To
HALL SURROUND 1	Receive dynamic three-dimensional sound.
HALL SURROUND 2	Watch a movie.
SIMULATED STEREO	Receive monaural sound with surround-like effect.
OFF	Cancel audio effect.

6 Press MENU to return to the original screen.

To reset to the factory preset setting
Move the cursor (▶) to RESET at the bottom of the AUDIO ADJUST menu, and press ENTER.

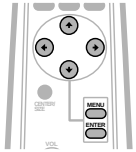
Notes
- You can adjust the items in AV MEMORY for each input from VIDEO 1, 2 and 3, and RGB 1 IN and RGB 2 IN.
- You can operate the menu using the buttons on the monitor. VOLUME + functions the same as ↑ and →, and VOLUME – as ↓ and ←.

EN

Turning the power off automatically

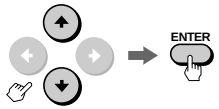
(AUTO SHUT OFF)

You can set the monitor to turn off when the time you specify has passed after the input of the sync signal from the computer shut off.

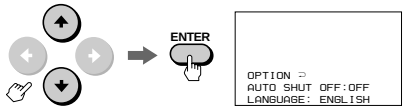


1 Press MENU.

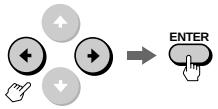
2 Press ↑ or ↓ to select OPTION, and press ENTER.



3 Press ↑ or ↓ to select AUTO SHUT OFF, and press ENTER.



4 Press ← or → to select 60 (minutes), 90 (minutes) or 120 (minutes), and press ENTER.



5 Press MENU to return to the original screen.

After the time you specify in step 4 has passed after cancellation of the input of the sync signal, the power turns off and the STANDBY indicator and the ⏻ indicator will light up.

The power turns on if you press POWER on the remote control or a signal is input from the computer again.

Note

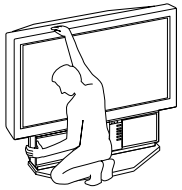
- You cannot use this function for the input from VIDEO IN.

Cleaning the air filter

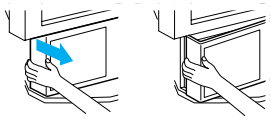
The air filter should be cleaned once a month. When it becomes difficult to remove the dust, replace the filter with a new one. To clean the filter, follow the steps below.

1 Turn off the power switch on the monitor and unplug the power cord.

2 Remove the front panel from the monitor.

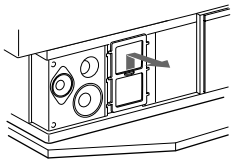


Hold the monitor tightly.

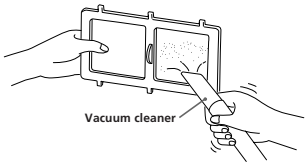


Pull the panel towards you, holding its left end. Be careful not to damage your nails.

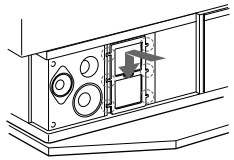
3 Pull the air filter upwards to remove.



4 Remove the dust from the filter with a vacuum cleaner.



5 Attach a new filter to the monitor.
Fit the six projections securely.



6 Mount the front panel.
Be careful not to injure the speakers.

Notes

- Clean the air filter periodically. Otherwise, the temperature inside the monitor may rise abnormally.
- Do not use a torn filter. Fit the six projections on the filter to the monitor securely. Dust inside the monitor may cause distorted picture and also fire.
- Be sure to attach the air filter securely. Otherwise, the monitor will not turn on.
- Contact your Sony dealer for a new filter.

EN

Replacing a lamp

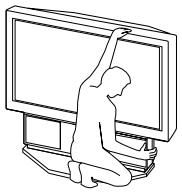
If the screen becomes dark, the color looks unusual, or the LAMP indicator on the front of the monitor flashes, it is time to replace the lamp with a new one.

Before replacement

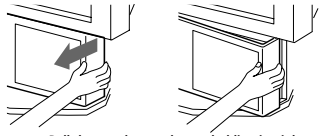
- Be sure to use the Sony XL-100U lamp unit (not supplied) for replacement. Use of other lamps causes damage to the monitor.
- Do not remove the lamp for any purpose other than replacement.
- Before replacement, be sure to turn off the monitor and unplug the power cord.
- When replacing the lamp, let it cool down completely, as the surface of the lamp remains hot for at least 30 minutes after the power has been switched off.
- Do not leave the removed lamp near the inflammable materials.
- Do not pour water onto the removed lamp, nor put any object inside the lamp.
- Do not put inflammable materials and metal objects inside the lamp receptacle on the monitor, after removing the lamp. Do not touch the receptacle.
- Fit the new lamp securely, otherwise the screen may become dark, or it may cause fire.

1 Turn off the power switch on the monitor and unplug the power cord.
Wait at least 30 minutes to allow the lamp to cool down before replacing it .

2 Remove the front panel.

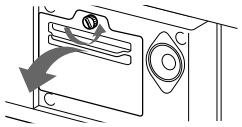


Hold the monitor tightly.

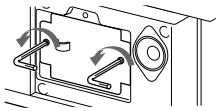


Pull the panel towards you, holding its right end. Be careful not to damage your nails.

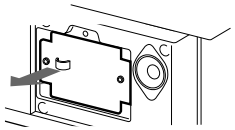
3 Untighten the screw with a coin or similar object to remove the lamp cover.



4 Loosen the two screws that secure the lamp, then pull out the lamp.
The lamp is very hot immediately after use. Never touch the front glass of the lamp or the surrounding parts.



Loosen the two screws with the hexagon head wrench (supplied with the lamp).



Pull out straight towards you by holding the handle.

Replace the removed lamp into the empty box of the replacement lamp.

5 Mount the new lamp and tighten the two screws securely.

6 Mount the lamp cover and tighten the screw.

7 Mount the front panel.
Be careful not to damage the speakers of the monitor.

Notes

- Do not touch the front glass of a new lamp or the glass of the lamp receptacle. This may reduce picture quality or lamp life.
- Be sure to attach the lamp securely. Otherwise, the monitor will not turn on.
- A laud sound may be heard when the lamp burns. This is not dangerous.
- Consult your Sony dealer for the XL-100U lamp unit.

Troubleshooting

If the problem persists after trying the methods below, contact your nearest Sony dealer.

No picture

- ➡ Check that the power cord is connected firmly.
- ➡ Is the power of the monitor turned on?
- ➡ Is the air filter mounted securely? (page **23**)
- ➡ Is the lamp cover attached securely? (page **24**)
- ➡ Check that the power of the connected equipment is turned on.
- ➡ Try to press any key on the connected computer.
- ➡ Check that the RGB signal cable or audio/video cords are properly connected. (The supplied HD15-HD15 adaptor may be needed for some models of IBM PC/AT or compatible computers. For a Macintosh or compatible computer use the supplied Macintosh adaptor.)
- ➡ Make sure that no pins on the HD15 connectors are bent.
- ➡ Check that the video card is seated completely in the proper bus slot.
- ➡ Check that the frequency range of the input signal is within that specified for the monitor. (If not, "OUT OF SCAN RANGE" appears on the screen.)
- ➡ The monitor does not accept an interlace mode signal.
- ➡ For customers using Windows 95 — If "KL-W7000" or "KL-W9000" is not displayed as "Monitor type" when selecting "SONY" as "Manufacturer" from the device select screen in Windows 95, select "Standard monitor" as "Manufacturer" and "Plug and Play monitor (VESA DDC)" as "Monitor type," or select "SONY Corporation" as "Manufacturer" and "KL-W7000" or "KL-W9000" as "Monitor type."

Picture and sound output are delayed

- ➡ When the green ⏻ (power) indicator on the front is flashing, the monitor is warming up.
- ➡ It will take 30 minutes for the monitor to display the picture again after the monitor is switched off.

Screen lit and cannot see the picture

- ➡ Be sure that you are watching the monitor within the optimum viewing area. (page **5**)

Good picture, no sound

- ➡ Press VOL+ (VOLUME+).
- ➡ Press MUTING so that "MUTING" disappears from the screen. (page **13**)

Fuzzy picture

- ➡ Set the NR option in the VIDEO ADJUST menu to LOW or HIGH.
- ➡ If you use the monitor in a cold place, moisture condensation may have occurred. Leave the monitor as it is to let moisture evaporate.

Dark picture

- ➡ Replace the lamp for the light source with a new one. (page **24**)

No color, abnormal color

- ➡ Adjust the picture in the VIDEO ADJUST menu. (page **18**)

Double images

- ➡ Use of an extension cable, excessive cable length or loose connection can produce this symptom.

Computer picture not centered or sized properly

- ➡ Adjust the centering and size so that the picture fits the screen. (page **16**)

Distorted picture

- ➡ Check your video card manual for proper monitor setting.
- ➡ Check that the frequency and the graphic mode at which you are trying to input is within the acceptable range. (page **9**) Even within the proper range some video cards may have a sync pulse that is too narrow for the monitor to sync correctly.

No picture, no sound from the connected equipment

- ➡ Are all the connecting cables connected?
- ➡ Try to press the RGB or VIDEO button on the remote control. (page **12**)

The remote control does not function.

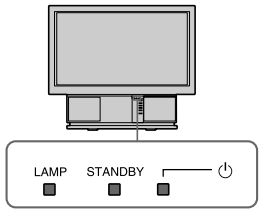
- ➡ Are the batteries worn out?

The humming noise of fans is heard even after the monitor has been turned off.

- ➡ The fans installed inside the monitor are working to prevent internal heat build-up. They will stop about 2 minutes later.

EN

What flashing of the indicators on the front of the monitor means



The ⏻ (power) (green), STANDBY (orange) and/or LAMP (red) indicators indicate the conditions of the monitor and warnings by lighting or flashing, as follows.

The ⏻ indicator lights.
➡ The power of the monitor is on.

The STANDBY indicator lights.
➡ The monitor is in standby mode. The monitor is turned on by pressing POWER on the remote control.

The ⏻ and STANDBY indicators light.
➡ The Auto Shut Off function works. The monitor has been turned off when the time you specify has passed after the input of the computer is cut off.

The ⏻ indicator flashes.
➡ The lamp for the light source is ready to turn on. Within 30 minutes the picture is displayed on the screen.

The LAMP and STANDBY indicators flash.
➡ The air filter or the lamp cover is not attached securely. When you correct, the STANDBY lamp lights up and the monitor enters the standby mode. (pages **23, 24**)

The LAMP indicator flashes.
➡ The lamp for the light source burns out. Replace it with new one. (page **24**)

The LAMP, STANDBY and ⏻ indicators flash.
➡ The temperature inside the monitor has risen abnormally, or the fans have stopped. Check that the air filter is not clogged and the ventilation holes are not blocked. After a while turn on the monitor. (page **23**)

If the monitor is not recovered after correcting the problems, contact with qualified Sony personnel.

Timing chart for the Wide-VGA, Wide-SVGA and Wide-XGA signals

		Wide-VGA	Wide-SVGA	Wide-XGA
Pixel Clock (MHz)		34.238	53.94	87.44
1dot (nsec)		29.207	18.539	11.436
1H (µsec)		31.777	26.4	20.676
H-Active (µsec)		25.235	19.874	15.736
H-Blank (µsec)		6.542	6.526	4.94
H-Front porch (µsec)		0.701	0.89	0.366
	(dots)	24	48	32
H-Sync	(µsec)	3.738	3.263	2.104
	(dots)	128	176	184
H-Back porch (µsec)		2.103	2.373	2.47
	(dots)	72	128	216
H-Sync Polarity		–	–	–
V-TTI Time (Lines)		525	628	806
V-Addr Time (Lines)		480	600	768
V-Blank Start (Lines)		488	600	768
V-Blank Time (Lines)		29	28	38
V-Sync Start (Lines)		490	601	771
V Bottom Border (Lines)		8	0	0
V Front Porch (Lines)		2	1	3
Ver Sync Time (Lines)		2	4	6
V Back Porch (Lines)		25	23	29
V Top Border (Lines)		8	0	0
V-Sync Polarity		+	+	+

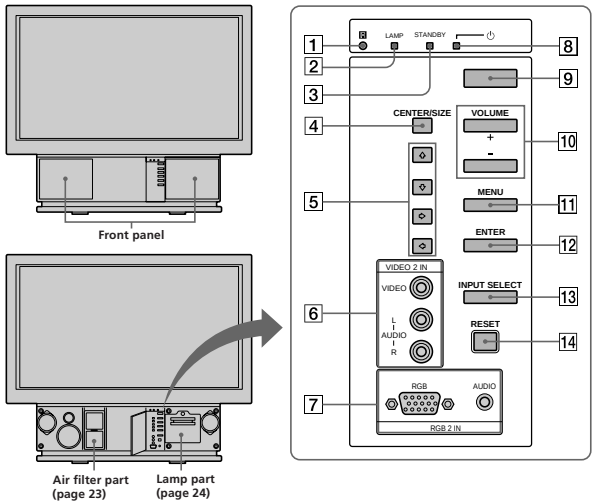
Identifying the parts

This section briefly describes the buttons and controls on the monitor and on the remote control. For more information, refer to the pages next to each description.

Projection monitor — Front

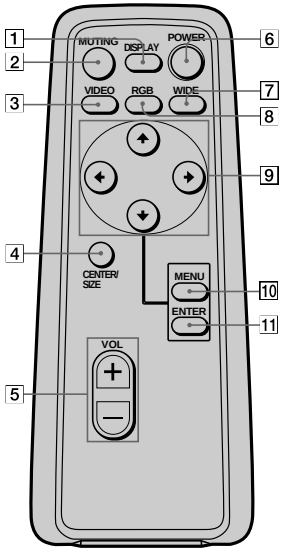
With the front panel attached

With the front panel removed



1 Remote sensor
2 LAMP indicator (pages **24**, **26**)
3 STANDBY indicator (pages **12**, **26**)
4 CENTER/SIZE button (page **16**)
5 ⇧/⇩/⇦/⇨ buttons (page **16**)
6 VIDEO 2 IN jacks (page **10**)
7 RGB 2 IN connector (pages **7**, **8**)
8 ⏻ (power) indicator (pages **12**, **26**)
9 Power switch (page **12**)
10 VOLUME +/– buttons (page **12**)
11 MENU button (page **11**)
12 ENTER button (page **11**)
13 INPUT SELECT button (page **12**)
14 RESET button (pages **16**, **17**)

Remote control

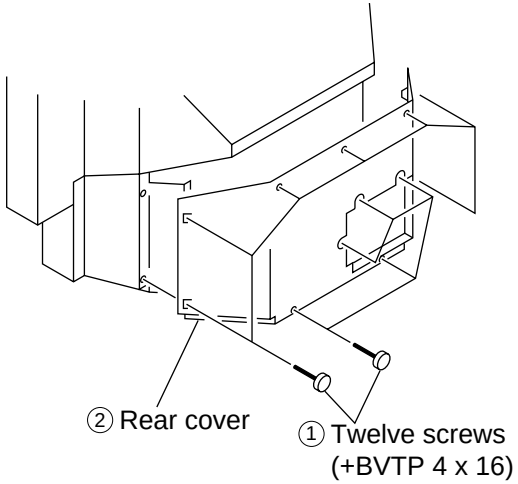


1 DISPLAY button (page **13**)
2 MUTING button (page **13**)
3 VIDEO button (page **12**)
4 CENTER/SIZE button (page **16**)
5 VOL (volume) +/– buttons (page **12**)
6 POWER button (page **12**)
7 WIDE button (pages **13**, **15**)
8 RGB button (page **12**)
9 ⇧/⇩/⇦/⇨ buttons (pages **11**, **16**)
10 MENU button (page **11**)
11 ENTER button (page **11**)

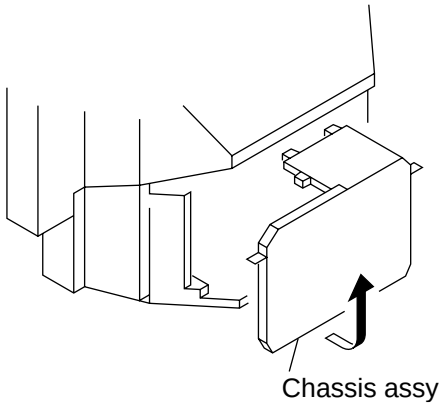
EN

SECTION 2
DISASSEMBLY

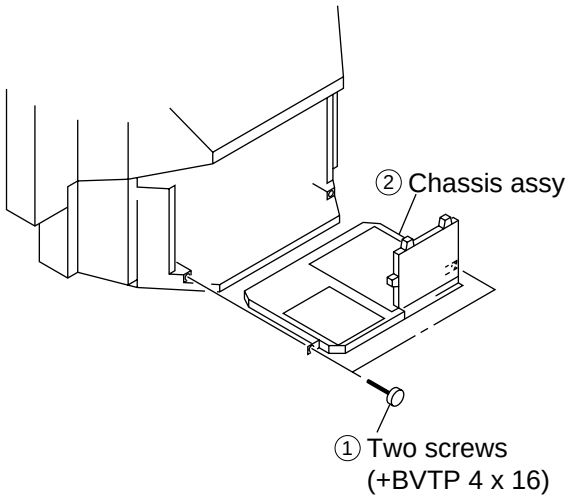
2-1. REAR COVER REMOVAL



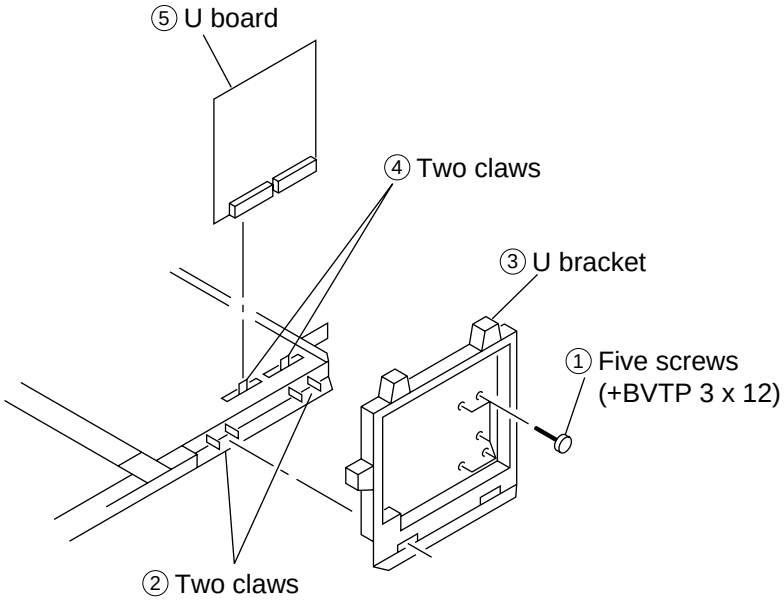
2-3. SERVICE POSITION



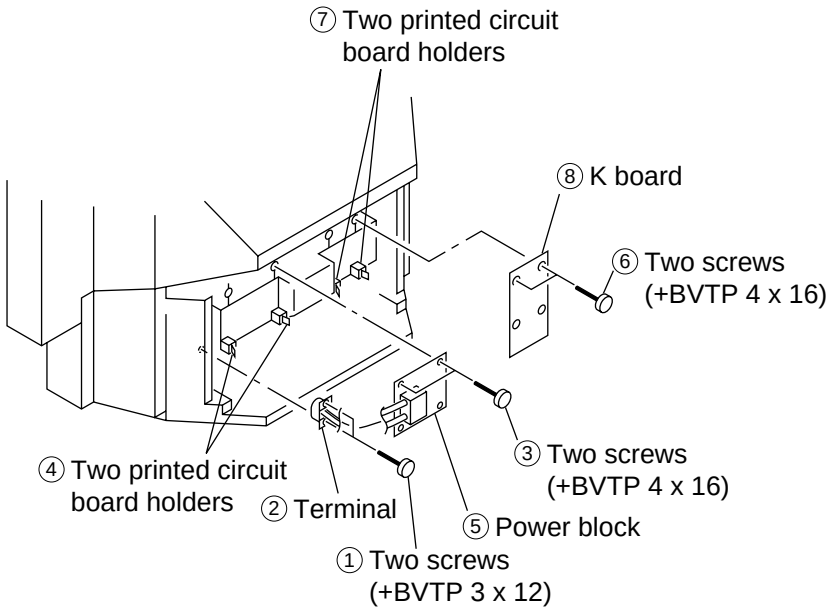
2-2. CHASSIS ASSY REMOVAL



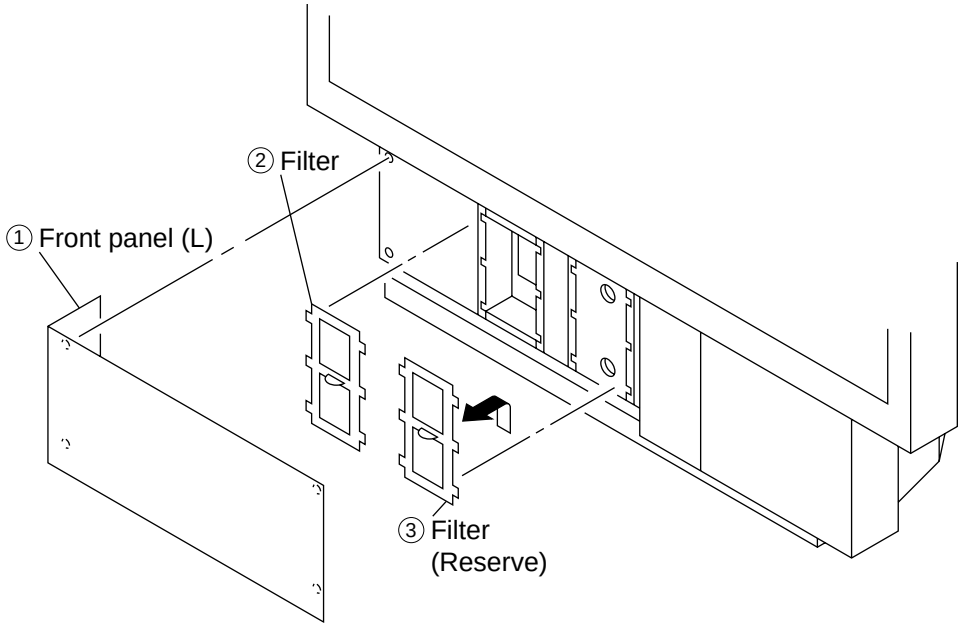
2-4. U BOARD REMOVAL



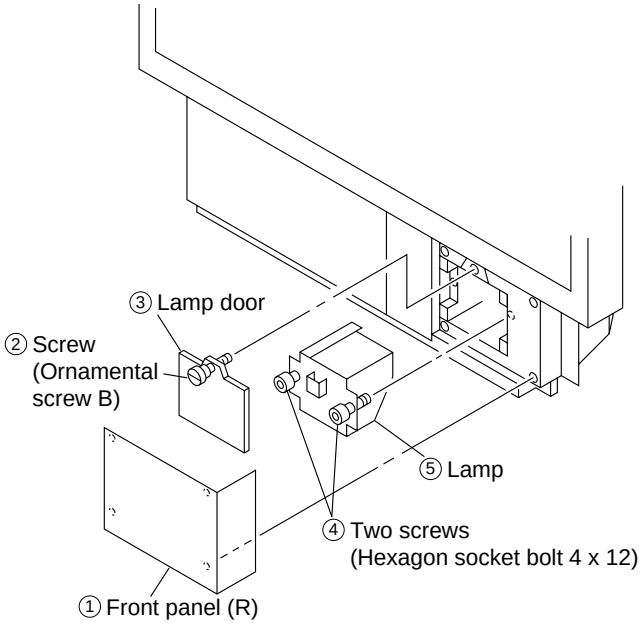
2-5. POWER BLOCK AND K BOARD REMOVAL



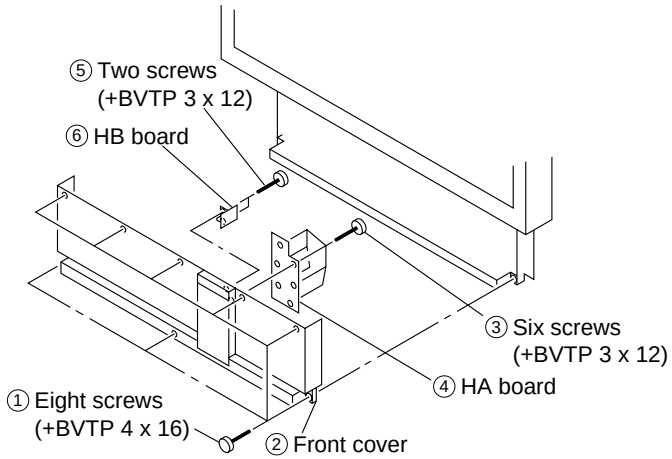
2-6. FILTER REMOVAL



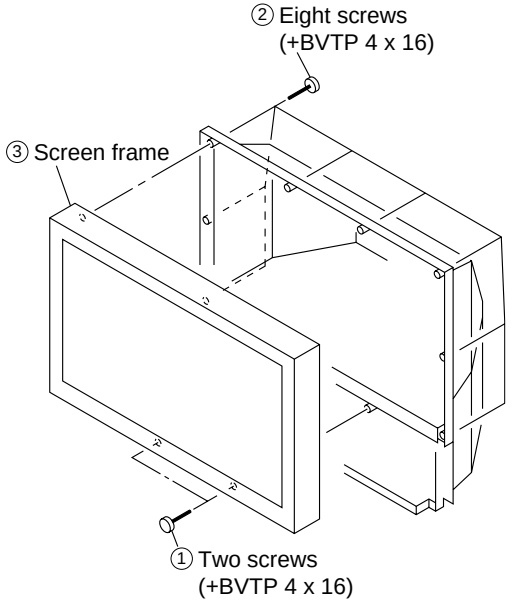
2-7. LAMP REMOVAL



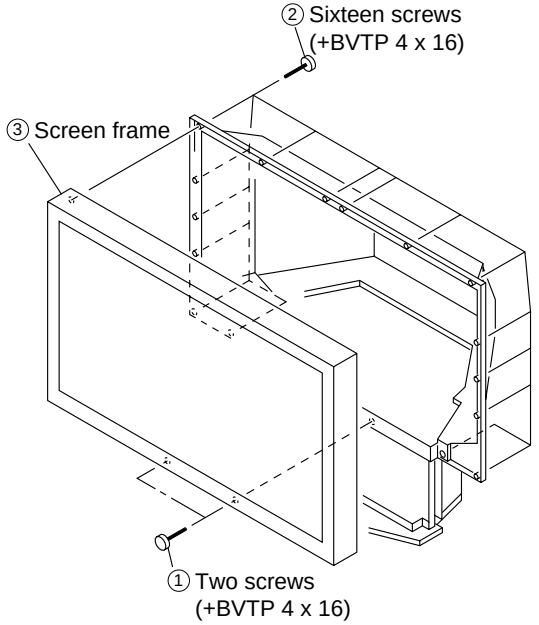
2-8. HA AND HB BOARDS REMOVAL



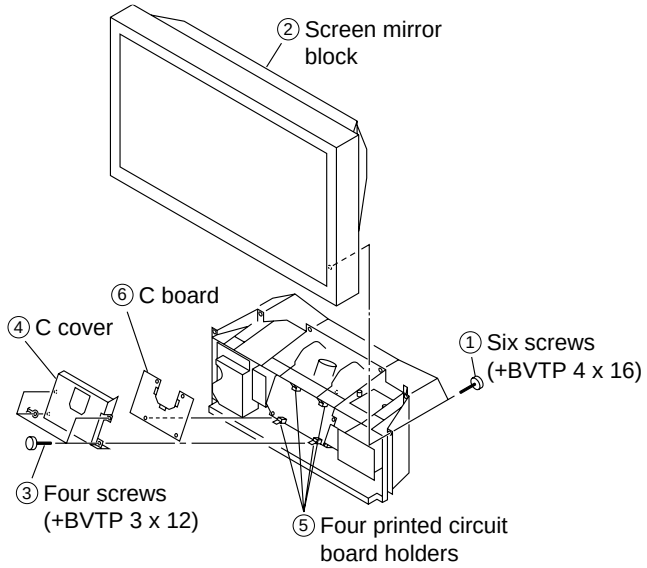
2-9-1. SCREEN FRAME REMOVAL [W7000]



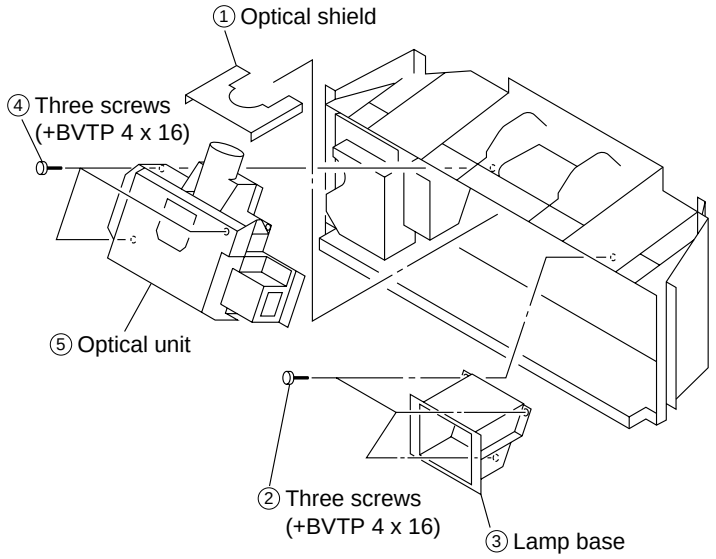
2-9-2. SCREEN FRAME REMOVAL [W9000]



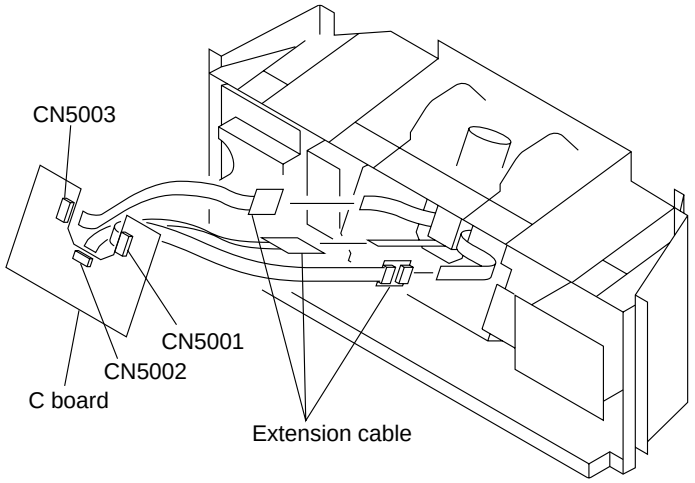
2-10-1. C BOARD REMOVAL



2-11. OPTICAL UNIT REMOVAL



2-10-2. EXTENSION CABLE (C BOARD)

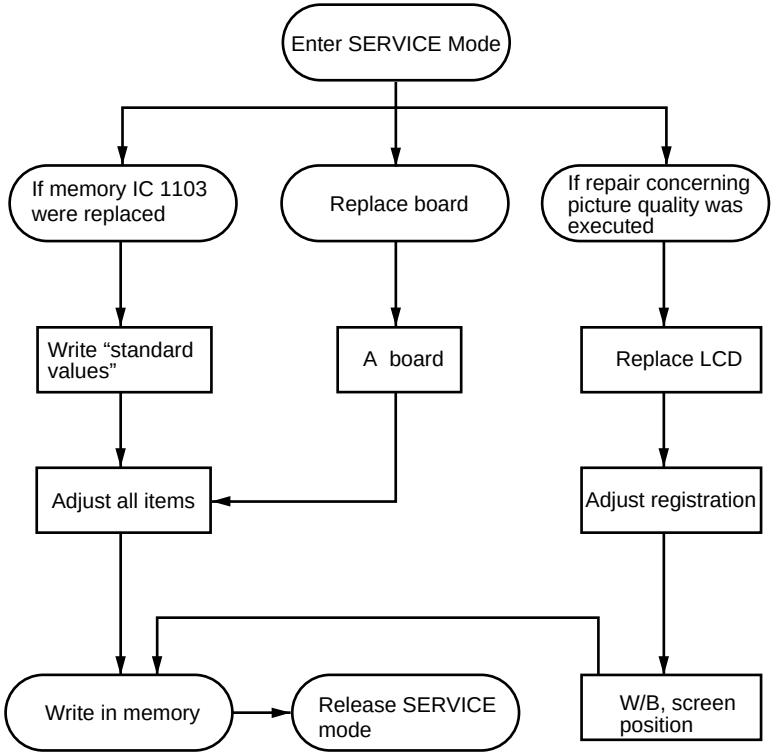


SECTION 3
CIRCUIT ADJUSTMENTS

ELECTRICAL ADJUSTMENT IN SERVICE MODE

The SERVICE mode cannot be entered with the remote commander RM-Y980 attached to this set. Use the commander of other TV set.

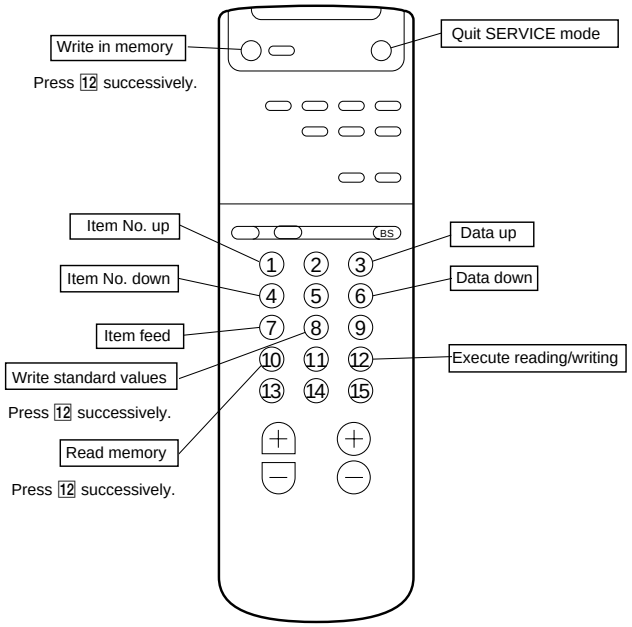
Adjustment in SERVICE mode



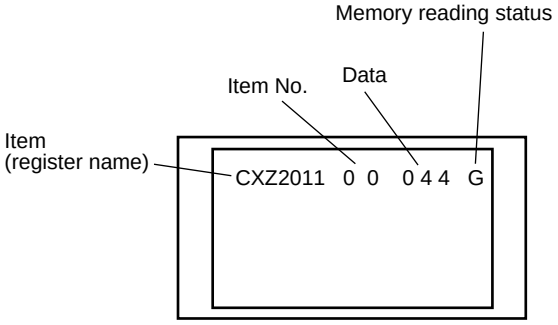
Note: • Write data in the memory each time when one item was adjusted.
• Adjusted data are not saved if the power is turned off before they are written in the memory.

Function of commander in SERVICE mode

* Example of SERVICE mode using the commander of other TV set



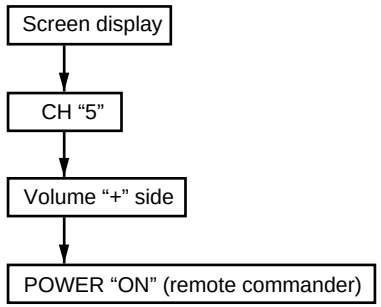
Screen in SERVICE mode



G: Memory reading normal
NG: Memory reading failed

BASIC ADJUSTMENT IN SERVICE MODE

1. To enter SERVICE mode
   1) Turn the POWER switch on the TV set "ON", then make it in standby status with the remote commander.
   2) Operate the remote commander as follows:



2. To read the memory
   1) Enter SERVICE mode.
   2) Press [10] → [12] buttons on the remote commander, and the adjusted values and set values of all items written in the memory are read out.

   Note: If the memory IC was replaced, do not read the memory before writing standard values.

3. Adjustment of screen
   1) Select the item No. to be adjusted using [1] and [4] buttons on the remote commander.
   2) Adjust with [3] and [6] buttons so as to satisfy the picture quality and the set values.

4. To write data in the memory
   - After adjustment, press "MUTING" [12] buttons to write data in the memory. Press [12] button while green "WRITE" is displayed on the screen (within about 3 seconds).

     Color of WRITE characters on screen
     When [MUTING] button ON ... . Green
     When [12] button ON ..... Red

5. To release SERVICE mode
   - Turn off the POWER switch on TV set and again turn it on. As a result, the SERVICE mode display is cleared and normal TV mode is resumed.
   - Or, turn off the POWER switch from the remote commander and again turn on the POWER switch on the remote commander in the standby status. As a result, the SERVICE mode display is cleared and normal TV mode is resumed.

6. To write +standard values+
   1) Enter SERVICE mode.
   2) Press 8 button, and green +STANDARD WRITE+ is displayed at the upper right of screen. Successively, press 12 button while this characters are displayed (within about 3 seconds). Green characters change to red +STANDARD WRITE+, then the screen becomes blank, and after about 5 seconds, the RGB 1 is selected and the operation stops. At this time, green +G+ is displayed. When +standard values+ writing is executed, the standard data in the microprocessor on the selected channel are written in the memory. Thus, the initialization is made.

   Note: Writing of +standard values+ must be executed initially, only if the memory IC 2008 and 2009 were replaced.

SERVICE LIST

CXA2011Q

Item Display	Register Name	Range	Stndard Values		Typical Standard Values
			VIDEO	RGB	
0 DLVL	DRIVE LEVEL	0-63	44		44 2 kinds, RGB 3ch gain control
1 SW2	SW2	0,1	0		0 1 kind
2 SW1	SW1	0,1	0		0 1 kind
3 SW0	SW0	0,1	0		0 1 kind
4 SBOF	SUB BRI OFFSET	0-63	23	43	2 kinds. Offset of VIDEO/RGB SUB BRIGHT 0=–31, · · , 63=+31
5 RDOF	R DRIVE OFFSET	0-63	31	31	2 kinds. VIDEO/RGB R DRIVE
6 GDOF	G DRIVE OFFSET	0-63	31	31	2 kinds. VIDEO/RGB G DRIVE
7 BDOF	B DRIVE OFFSET	0-63	31	31	2 kinds. VIDEO/RGB B DRIVE
8 RDMD	R DRIVE OFFSET (color temp. “middle”)	0-63	32		32 1 kind. Offset of R color temp. “middle” (center value 31)
9 GDMD	G DRIVE OFFSET (color temp. “middle”)	0-63	31		31 1 kind. Offset of G color temp. “middle” (center value 31)
10 BDMD	B DRIVE OFFSET (color temp. “middle”)	0-63	28		28 1 kind. Offset of B color temp. “middle” (center value 31)
11 RDLO	R DRIVE OFFSET (color temp. “low”)	0-63	34		34 1 kind. Offset of R color temp. “low” (center value 31)
12 GDLD	G DRIVE OFFSET (color temp. “low”)	0-63	31		31 1 kind. Offset of G color temp. “low” (center value 31)
13 BDLO	B DRIVE OFFSET (color temp. “low”)	0-63	24		24 1 kind. Offset of B color temp. “low” (center value 31)

WB (CXA1315)

Item Display	Register Name	Range	Standard Values		Typical Standard Values
0 RCOI	Red Cut Off	0-255	124 (VIDEO)	124 (RGB)	2 kinds : Red white balance (VIDEO, RGB)
1 RCOI	Green Cut Off	0-255	124 (VIDEO)	124 (RGB)	2 kinds : Green white balance (GCO center)
2 BCOI	Blue Cut Off	0-255	124 (VIDEO)	124 (RGB)	2 kinds : Blue white balance
3 RCOM	Red Cut Off OFFSET (color temp. “middle”)	0-255	132		Red W/B of color temp. “middle” (center value 31)
4 GCOM	Green Cut Off OFFSET (color temp. “middle”)	0-255	127		Green W/B of color temp. “middle” (center value 31)
5 BCOM	Blue Cut Off OFFSET (color temp. “middle”)	0-255	123		Blue W/B of color temp. “middle” (center value 31)
6 RCOL	Red Cut Off OFFSET (color temp. “low”)	0-255	138		Red W/B of color temp. “low” (center value 31)
7 RCOL	Green Cut Off OFFSET (color temp. “low”)	0-255	127		Green W/B of color temp. “low” (center value 31)
8 BCOL	Blue Cut Off OFFSET (color temp. “low”)	0-255	118		Blue W/B of color temp. “low” (center value 31)

BIAS3 (CXA1315)

Item Display	Register Name	Range	Standard Values		Typical Standard Values
0 RBS	RL_Bias	0-255	0 (VIDEO)	0 (RGB)	RL Bias (2 systems of VIDEO, RGB)
1 BLBS	RL_Bias	0-255	0 (VIDEO)	0 (RGB)	BL Bias (2 systems of VIDEO, RGB)
2 RHBS	RL_Bias	0-255	255 (VIDEO)	255 (RGB)	RH Bias (2 systems of VIDEO, RGB)
3 BHBS	BH_Bias	0-255	255 (VIDEO)	255 (RGB)	BH Bias (2 systems of VIDEO, RGB)
4 RLBM	RL_Bias off set MID	0-255	131		RL Bias offfset value of color temp. “middle” (center value 31)
5 BLBM	BL_Bias off set MID	0-255	121		BL Bias offfset value of color temp. “middle” (center value 31)
6 RHBM	RH_Bias off set MID	0-255	127		RH Bias offfset value of color temp. “middle” (center value 31)
7 BHBM	BH_Bias off set MID	0-255	127		BH Bias offfset value of color temp. “middle” (center value 31)
8 RLBM	RL_Bias off set LOW	0-255	136		RL Bias offfset value of color temp. “low” (center value 31)
9 BLBL	BL_Bias off set LOW	0-255	115		BL Bias offfset value of color temp. “low” (center value 31)
10 RHBM	RH_Bias off set LOW	0-255	127		RH Bias offfset value of color temp. “low” (center value 31)
11 BHBL	BH_Bias off set LOW	0-255	127		BH Bias offfset value of color temp. “low” (center value 31)
12 SLSH	Sample Phase	0-7	3 (VIDEO 4:3), 4 (VIDEO 16:9)	3 (RGB 16: 9), 4 (RGB 16: 9)	4 kinds of SLSH (VIDEO, RGB) × (NORMAL, FULL)

A_OUT (NVM A2 DATA)

Item Display	Register Name	Range	Standard Values	Typical Standard Values
0 RDON	NTSC RDOF	0-63	31	NVM A2 Data of address 00
1 GDON	NTSC GDOF	0-63	31	Data of address 01
2 BDON	NTSC BDOF	0-63	31	Data of address 02
3 RCON	NTSC RCOI	0-255	124	Data of address 03
4 GCON	NTSC GCOI	0-255	124	Data of address 04
5 BCON	NTSC BCOI	0-255	31	Data of address 05
6 RDOH	HD RDOF	0-63	31	Data of address 06
7 GDON	HD GDOF	0-63	31	Data of address 07
8 BDON	HD BDOF	0-63	31	Data of address 08
9 RCON	HD RCOI	0-255	124	Data of address 0B
10 GCOH	HD GCOI	0-255	124	Data of address 0A
11BCOH	HD BCOI	0-255	124	Data of address 09

CXA1839

Item Display	Register Name	Range	Standard Values		Typical Standard Values
			VIDEO	RGB	
0 SHUE	SUB-HUE	0-15	8	8	2 kinds (VIDEO, RGB)
1 SBRT	SUB-BRT	0-15	8	8	2 kinds (VIDEO, RGB)
2 R-Y/R	R-Y/R	0-15	0	0	2 kinds (VIDEO, RGB)
3 R-Y/B	R-Y/B	0-15	8	15	2 kinds (VIDEO, RGB)
4 G-Y/R	G-Y/R	0-15	15	15	2 kinds (VIDEO, RGB)
5 G-Y/B	G-Y/B	0-15	8	0	2 kinds (VIDEO, RGB)
6 SPC2	SUB-CON2	0-15	8	8	2 kinds (VIDEO, RGB)
7 SCL2	SUB-COL2	0-15	8	8	2 kinds (VIDEO, RGB)
8 RGB2	RGB2_LEVEL	0-15	11		1 kind
9 SSHP	SUB-SHP	0-3	3/3	1	4 kinds (VIDEO, RGB) × (NORMAL, WIDE)
10 SHPF	SHP-F0	0-3	2/2	1	4 kinds (VIDEO, RGB) × (NORMAL, WIDE)
11 PREL	PRE_OVER	0-3	3/3	3	4 kinds (VIDEO, RGB) × (NORMAL, WIDE)
12 Y-DC	DC-TRAN	0-15	0	0	2 kinds, transmission rate of DC. (VIDEO, RGB)
13 DPIX	DYNAMIC-PIC	0-3	0	0	2 kinds, Auto pedestal. (VIDEO, RGB)
14 CECL	CEC_LEVEL	0-3	3	1	2 kinds, Chroma edge clear. (VIDEO, RGB)
15 RHUE	RGB HUE	0-63	–	31	1 kind, Hue adjustment at RGB input.
16 RCOL	RGB COLOR	0-63	–	31	1 kind, Color adjustment at RGB input.
17 RSHP	RGB SHAPNESS	0-63	–	25	1 kind, Sharpness adjustment at RGB input.
18 SHPP	SHARP PRESEN.	0-63	35	25	1 kind, AI mode, PRESENTATION sharpness value
19 SHPS	SHARP STANDARD	0-63	31	25	1 kind, AI mode, STANDARD sharpness value
20 SHPM	SHARP MOVIE	0-63	27	31	1 kind, AI mode, MOVIE sharpness value

CXD2052 (Digital Chroma Decoder)

Item Display	Register Name	Range	Standard Values		Typical Standard Values
			VIDEO	RGB	
0 ACR	ACR	0-255	53		35h
1 AKO	AKO	0-255	20		24h
2 AKF	AKF	0-255	50		32h
3 PKO	PKO	0-255	252		FCh
4 PKF	PKF	0-255	16		10h
5 OFS	OFS	0-255	128		80h
6 BPF1	BPF1	0-1	0(C)	1(S)	2 kinds of S/COMP
7 BPF2	BPF2	0-1	0(C)	0(S)	2 kinds of S/COMP
8 TRAP	TRAP	0-1	0		0
9 HPF	HFP	0-7	4(VIDEO)		2 kinds of VIDEO/RGB
10 FCP	FCOP	0-1	0		0
11 DCON	DCON	0-1	0		0
12 F2CC	F2CCH	0-1	0		0
13 EDTV	EDTV	0-1	1		1
14 KILL	KILL	0-1	0		0
15 APCO	APCOF	0-1	0		0
16 XFH	XFH	0-1	0		
17 XFH	XFH	0-1	0(C)	0(S)	2 kinds of S/COMP
18 TA	TA	0-31	16		1ch
19 TB	TB	0-63	38(C)	58(C)	2 kinds of S/COMP
20 TO	TO	0-63	42(C)	55(C)	2 kinds of S/COMP
21 TE	TB	0-63	23(C)	55(S)	2 kinds of S/COMP

3C (3-Dimensional Com μ PD6487)

Item Display	Register Name	Range	Standard Values			Typical Standard Values
			Others	PRESENTATION	MOVIE	
0 MS	MSI, MSO	0-3	0			00 00 : Normal, 01 : 2D, 10 : 3D
1 BPFS	BPFS	0-1	0			0 0 : Normal, 1 : Band-pass YC separation
2 YDLL	YDELAYL	0-7	2/2			1 Kind Output delay designation
3 HRD	HRD8-1	0-255	21			21 (2Ah) 21 (2A) : B lock only
4 DYCO	DYCOR	0-15	5/5			1 Kind DY detection coaring level
5 DYGA	DYGAIN	0-15	8/8			1 Kind DY detection gain
6 DCCO	DCCOR	0-15	5/5			1 Kind DC detection coaring level
7 DCGA	DCGAIN	0-15	6/6			1 Kind DC detection gain
8 VTR	VTR1, VTR0	0-3	0			00 00 : Normal, 01 : Standard, 10 : Non-Standard
9 VTRR	VTRR	0-31	7/7			1 Kind VTR detection level
10 LDS	LDSOFF	0-1	0			0 LD still detect selection
11 HSDR	HSDR	0-31	7/7			1 Kind Sync detection level
12 BSDR	BSDR	0-31	7			7 Sync detection level
13 WSCO	WSCOR	0-7	7/7			1 Kind Weak field detection coaring level
14 WSD1	WSDR1	0-15	15/15			1 Kind Weak field detection level 1
15 WSD2	WSDR2	0-15	15/15			1 Kind Weak field detection level 2
16 VAPG	VAPGAIN	0-7	4/4	7/7	0/0	2 Kinds V aperture gain *1
17 VAPI	VAPINV	0-31	12/12	20/20	12/12	2 Kinds V aperture inversion point *1

*1 : 6 kinds of (STANDARD/AV MEMORY, PRESENTATION, MOVIE) × (NORMAL/FULL, OTHERS)

1C (3-Dimensional Com μ PD6486)

Item Display	Register Name	Range	Standard Values			Typical Standard Values
			Others	Presen.	Movie	
0 MS	MS1, MS0	0-3	0			
1 BPFS	BPFS	0-1	0			
2 YDLL	YDELAYL	0-7	2/2			
3 HRD	HRD8-1	0-256	21			
4 DYCO	DYCOR	0-15	5/5			
5 DYGA	DYGAIN	0-15	8/8			
6 DCCO	DCCOR	0-15	5/5			
7 DCGA	DCGAIN	0-15	6/6			
8 VTR	VTR1, VTR0	0-3	0			
9 VTRR	VTRR	0-31	7/7			
10 LDS	LDSOFF	0-1	0			
11 HSDR	HSDR	0-31	7/7			
12 BSDR	BSDR	0-31	7			
13 WSCO	WSCOR	0-7	7/7			
14 WSD1	WSDR1	0-15	15/15			
15 WSD2	WSDR2	0-15	15/15			
16 VAPG	VAPGAIN	0-7	4/4	7/7	0/0	NORMAL, FULL/OTHERS
17 VAPI	VAPINV	0-31	12/12	20/20	12/12	NORMAL, FULL/OTHERS

MID2 (CXD2072Q VIDEO)

Item Display	Register Name	Range	Standard Values				Typical Standard Values
			NORMAL/FULL	ZOOM	SUBTITLE	WIDEZOOM	
0 HSIZ	HSIZEA	0-255	88				Every input signal: H size adj. (NTSC)
1 VGAH	VGAHS	0-127	0				Every input signal polarity + Wide screen: H size adj. (RGB)
2 HPOS	HPOSIA	0-255	36				Every input signal: H position adj. (READ)
3 VSIZ	VSIZEA	0-255	F0	38	0	0	Every input signal polarity + Wide screen: V size adj.
4 VPOS	VPOSIA	0-255	28				Every input signal: V position adj. (READ)
5 HPHS	HPHASA	0-255	44				Every input signal polarity + Wide screen: H posi adj. (WRITE)
6 VPHS	VPHASA	0-255	0A	17	17	0F	Every input signal polarity + Wide screen: V posi adj. (WRITE)
7 WONA	WONA	0-1	0				Every input signal: MOVIE/STILL switching
8 OSCA	OSCA	0-1	1				Every input signal: Masking range switching
9 DLYA	DELAYA	0-7	3				Every input signal: Color difference delay adj. (INPUT)
10 HVSW	HVSW	0-3	2				Every input signal: Output Sync signal switching
11 YSDY	YSDY	0-7	2				Every input signal: YS delay adj.
12 DLY	DELAY	0-7	4				Every input signal: Color difference delay adj. (OUTPUT)
13 HBLK	HBLK	0-255	89				Every input signal: H blanking adj.
14 VBLK	VBLK	0-255	1F				Every input signal: V blanking adj.
15 IPVA	IPVA	0-1	0				Every input signal: Vertical linear interpolation
16 OFST	OFFSET	0-255	0				Every input signal: Linear interpolation offset setting
17 VSCA	VSCA	0-1	0	1	1	1	Every input signal: A ch vertical size
18 OSVA	OSVA	0-1	1				Every input signal: A ch vertical offset
19 PLL1	PLL1	0-7	0				Every input signal: PLL 1 frequency dividing ratio setting
20 YUV	YUV	0-3	0				Every input signal: YUV signal sampling ratio
21 REF	REF	0-7	0				Every input signal: V size reference value
22 CLPD	CLPDA	0-255	28				Every input signal: A ch clamp position adj.
23 HPH0	bit 0 of HPHASA	0-1	0				Every input signal polarity + Wide screen: H posi adj. (WRITE)
24 HPH0	bit 0 of VPHASA	0-1	0				Every input signal polarity + Wide screen: V posi adj. (WRITE)
25 HCOF	H CENT OF.	0-63	–				Every input signal: H center offset
26 H0OF	bit 0 of H CENT OF.	0-1	–				Every input signal: H center offset (bit 0)
27 VCOF	V CENT OF.	0-63	–				Every input signal: V center offset
28 V0OF	bit 0 of V CENT OF.	0-1	–				Every input signal: V center offset (bit 0)
29 HSOF	H SIZE OF.	0-63	–				Every input signal: H size offset
30 VSOF	V SIZE OF.	0-255	–				Every input signal: V size offset
31 HPR3	HPOSIA REF3	0-255	–				HPOSIA value when REF=3 of user preset signal
32 HPR4	HPOSIA REF4	0-255	–				HPOSIA value when REF=4 of user preset signal
33 HPR5	HPOSIA REF5	0-255	–				HPOSIA value when REF=5 of user preset signal
34 SCOF	V SCROLL OF.	0-31	–	0A	0A	0A	Every wide screen: V scroll offset
35 S0OF	bit 0 of V SCROLL OF.	0-1	–	0	0	0	Every wide screen: V scroll offset (bit 0)
36 SCRS	V SCROLL Standard value	0-63	–	17	17	0F	Every wide screen: V scroll standard value
37 S0RS	bit 0 of V SCROLL Standard value	0-1	–	0	0	0	Every wide screen: V scroll standard value (bit 0)

MID2 (CXD2072Q RGB (1))

Item Display	Register Name	Range	Standard Values					Typical Standard Values
			VGAT350	VGAG	W-VGA	VGA72	VGA75	
0 HSIZ	HSIZEA	0-255	A0					Every input signal: H size adj. (NTSC)
1 VGAH	VGAHS	0-127	2F	30	2E	2F	2B	Every input signal polarity + Wide screen: H size adj. (RGB)
2 HPOS	HPOSIA	0-255	2E	2E	2D	2E	2A	Every input signal: H position adj. (READ)
3 VSIZ	VSIZEA	0-255	3					Every input signal polarity + Wide screen: V size adj.
4 VPOS	VPOSIA	0-255	38	1E	1E	1E	1E	Every input signal: V position adj. (READ)
5 HPHS	HPHASA	0-255	42	42	43	4E	52	Every input signal polarity + Wide screen: H posi adj. (WRITE)
6 VPHS	VPHASA	0-255	3	8	8	6	0	Every input signal polarity + Wide screen: V posi adj. (WRITE)
7 WONA	WONA	0-1	0					Every input signal: MOVIE/STILL switching
8 OSCA	OSCA	0-1	1					Every input signal: Masking range switching
9 DLYA	DELAYA	0-7	3					Every input signal: Color difference delay adj. (INPUT)
10 HVSW	HVSW	0-3	1					Every input signal: Output Sync signal switching
11 YSDY	YSDY	0-7	1					Every input signal: YS delay adj.
12 DLY	DELAY	0-7	4					Every input signal: Color difference delay adj. (OUTPUT)
13 HBLK	HBLK	0-255	A0					Every input signal: H blanking adj.
14 VBLK	VBLK	0-255	0A	30	30	30	30	Every input signal: V blanking adj.
15 IPVA	IPVA	0-1	0					Every input signal: Vertical linear interpolation
16 OFST	OFFSET	0-255	0					Every input signal: Linear interpolation offset setting
17 VSCA	VSCA	0-1	1					Every input signal: A ch vertical siz
18 OSVA	OSVA	0-1	1					Every input signal: A ch vertical offset
19 PLL1	PLL1	0-7	4	4	4	5	5	Every input signal: PLL 1 frequency dividing ratio setting
20 YUV	YUV	0-3	1					Every input signal: YUV signal sampling ratio
21 REF	REF	0-7	5					Every input signal: V size reference value
22 CLPD	CLPDA	0-255	6A					Every input signal: A ch clamp position adj.
23 HPH0	bit 0 of HPHASA	0-1	0					Every input signal polarity + Wide screen: H posi adj. (WRITE)
24 VPH0	bit 0 of VPHASA	0-1	0					Every input signal polarity + Wide screen: posi adj. (WRITE)
25 HCOF	H CENT OF.	0-63	26					Every input signal: H center offse
26 H0OF	bit 0 of H CENT OF.	0-1	0					Every input signal: H center offset (bit 0
27 VCOF	V CENT OF.	0-63	0					Every input signal: V center offset
28 V0OF	bit 0 of V CENT OF.	0-1	0					Every input signal: V center offset (bit 0)
29 HSOF	H SIZE OF.	0-63	1F	20	20	1F	1B	Every input signal: H size offset
30 VSOF	V SIZE OF.	0-255	EB					Every input signal: V size offset
31 HPR3	HPOSIA REF3	0-255	28					HPOSIA value when REF=3 of user preset signal
32 HPR4	HPOSIA REF4	0-255	25					HPOSIA value when REF=4 of user preset signal
33 HPR5	HPOSIA REF5	0-255	28					HPOSIA value when REF=5 of user preset signal
34 SCOF	V SCROLL OF.	0-31	–					Every wide screen: V scroll offset
35 S0OF	bit 0 of V SCROLL OF.	0-1	–					Every wide screen: V scroll offset (bit 0)
36 SCRS	V SCROLL Standard value	0-63	–					Every wide screen: V scroll standard value
37 S0RS	bit 0 of V SCROLL Standard value	0-1	–					Every wide screen: V scroll standard value(bit 0)

MID2 (CXD2072Q RGB (2))

Item	Register	Range	Standard Values					Typical Standard Values
Display	Name		VGA85	SVGA56	SVGA60	W-SVGA	SVGA72	
0 HSIZ	HSIZEA	0-255	A0					Every input signal: H size adj. (NTSC)
1 VGAH	VGAHS	0-127	2F	26	1A	18	1F	Every input signal polarity + Wide screen: H size adj. (RGB)
2 HPOS	HPOSIA	0-255	2E	2A	27	27	28	Every input signal: H position adj. (READ)
3 VSIZ	VSIZEA	0-255	3	F0	F0	F0	F0	Every input signal polarity + Wide screen: V size adj.
4 VPOS	VPOSIA	0-255	1D	1F	1F	1F	1F	Every input signal: V position adj. (READ)
5 HPHS	HPHASA	0-255	3D	45	48	4C	3D	Every input signal polarity + Wide screen: H posi adj. (WRITE)
6 VPHS	VPHASA	0-255	4	7	8	8	9	Every input signal polarity + Wide screen: V posi adj. (WRITE)
7 WONA	WONA	0-1	0					Every input signal: MOVIE/STILL switching
8 OSCA	OSCA	0-1	1					Every input signal: Masking range switching
9 DLYA	DELAYA	0-7	3					Every input signal: Color difference delay adj. (INPUT)
10HVSW	HVSW	0-3	1					Every input signal: Output Sync signal switching
11YSDY	YSDY	0-7	1					Every input signal: YS delay adj.
12DLY	DELAY	0-7	4					Every input signal: Color difference delay adj. (OUTPUT)
13HBLK	HBLK	0-255	A0					Every input signal: H blanking adj.
14VBLK	VBLK	0-255	30					Every input signal: V blanking adj.
15IPVA	IPVA	0-1	0					Every input signal: Vertical linear interpolation
16OFST	OFFSET	0-255	0					Every input signal: Linear interpolation offset setting
17VSCA	VSCA	0-1	1	0	0	0	0	Every input signal: A ch vertical size
18OSVA	OSVA	0-1	1					Every input signal: A ch vertical offset
19PLL1	PLL1	0-7	5	4	4	4	4	Every input signal: PLL 1 frequency dividing ratio setting
20YUV	YUV	0-3	1					Every input signal: YUV signal sampling ratio
21REF	REF	0-7	5	2	2	2	2	Every input signal: V size reference value
22CLPD	CLPDA	0-255	6A					Every input signal: A ch clamp position adj.
23HPH0	bit 0 of HPHASA	0-1	1	1	0	0	0	Every input signal polarity + Wide screen: H posi adj. (WRITE)
24HPH0	bit 0 of VPHASA	0-1	0	0	1	1	1	Every input signal polarity + Wide screen: V posi adj. (WRITE)
25HCOF	H CENT OF.	0-63	26					Every input signal: H center offset
26H0OF	bit 0 of H CENT OF.	0-1	1	1	0	0	0	Every input signal: H center offset (bit 0)
27VCOF	V CENT OF.	0-63	0					Every input signal: V center offset
28V0OF	bit 0 of V CENT OF.	0-1	0	0	1	1	1	Every input signal: V center offset (bit 0)
29HSOF	H SIZE OF.	0-63	1F	16	0A	0A	0F	Every input signal: H size offset
30VSOF	V SIZE OF.	0-255	EB	E7	E7	E7	E7	Every input signal: V size offset
31HPR3	HPOSIA REF3	0-255	28					HPOSIA value when REF=3 of user preset signal
32HPR4	HPOSIA REF4	0-255	25					HPOSIA value when REF=4 of user preset signal
33HPR5	HPOSIA REF5	0-255	28					HPOSIA value when REF=5 of user preset signal
34SCOF	V SCROLL OF.	0-31	–					Every wide screen: V scroll offset
35S0OF	bit 0 of V SCROLL OF.	0-1	–					Every wide screen: V scroll offset (bit 0)
36SCRS	V SCROLL Standard value	0-63	–					Every wide screen: V scroll standard value
37S0RS	bit 0 of V SCROLL Standard value	0-1	–					Every wide screen: V scroll standard value(bit 0)

MID2 (CXD2072Q RGB (3))

Item	Register	Range	Standard Values					Typical Standard Values
Display	Name		SVGA75	XGA60	W-XGA	MAC13	MAC16	
0 HSIZ	HSIZEA	0-255	A0					Every input signal: H size adj. (NTSC)
1 VGAH	VGAHS	0-127	1A	1D	1C	2F	9	Every input signal polarity + Wide screen: H size adj. (RGB)
2 HPOS	HPOSIA	0-255	28	26	26	2E	24	Every input signal: H position adj. (READ)
3 VSIZ	VSIZEA	0-255	F0	F0	F0	3	F0	Every input signal polarity + Wide screen: V size adj.
4 VPOS	VPOSIA	0-255	1F	1F	1F	1E	1F	Every input signal: V position adj. (READ)
5 HPHS	HPHASA	0-255	51	4C	4C	4A	59	Every input signal polarity + Wide screen: H posi adj. (WRITE)
6 VPHS	VPHASA	0-255	7	8	8	0B	0F	Every input signal polarity + Wide screen: V posi adj. (WRITE)
7 WONA	WONA	0-1	0					Every input signal: MOVIE/STILL switching
8 OSCA	OSCA	0-1	1					Every input signal: Masking range switching
9 DLYA	DELAYA	0-7	3					Every input signal: Color difference delay adj. (INPUT)
10HVSW	HVSW	0-3	1					Every input signal: Output Sync signal switching
11YSDY	YSDY	0-7	1					Every input signal: YS delay adj.
12DLY	DELAY	0-7	4					Every input signal: Color difference delay adj. (OUTPUT)
13HBLK	HBLK	0-255	A0					Every input signal: H blanking adj.
14VBLK	VBLK	0-255	30					Every input signal: V blanking adj.
15IPVA	IPVA	0-1	0					Every input signal: Vertical linear interpolation
16OFST	OFFSET	0-255	0					Every input signal: Linear interpolation offset setting
17VSCA	VSCA	0-1	0	0	0	1	0	Every input signal: A ch vertical size
18OSVA	OSVA	0-1	1					Every input signal: A ch vertical offset
19PLL1	PLL1	0-7	4	4	4	6	4	Every input signal: PLL 1 frequency dividing ratio setting
20YUV	YUV	0-3	1					Every input signal: YUV signal sampling ratio
21REF	REF	0-7	2	4	4	5	3	Every input signal: V size reference value
22CLPD	CLPDA	0-255	6A	6A	6A	40	6A	Every input signal: A ch clamp position adj.
23HPH0	bit 0 of HPHASA	0-1	1	0	0	0	1	Every input signal polarity + Wide screen: H posi adj. (WRITE)
24VPH0	bit 0 of VPHASA	0-1	0	1	1	1	0	Every input signal polarity + Wide screen: V posi adj. (WRITE)
25HCOF	H CENT OF.	0-63	26	26	26	26	2E	Every input signal: H center offset
26H0OF	bit 0 of H CENT OF.	0-1	1	0	0	0	1	Every input signal: H center offset (bit 0)
27VCOF	V CENT OF.	0-63	0					Every input signal: V center offset
28V0OF	bit 0 of V CENT OF.	0-1	0	1	1	1	0	Every input signal: V center offset (bit 0)
29HSOF	H SIZE OF.	0-63	0A	0D	0D	1F	0	Every input signal: H size offset
30VSOF	V SIZE OF.	0-255	E7	E7	E7	EB	E7	Every input signal: V size offset
31HPR3	HPOSIA REF3	0-255	28					HPOSIA value when REF=3 of user preset signal
32HPR4	HPOSIA REF4	0-255	25					HPOSIA value when REF=4 of user preset signal
33HPR5	HPOSIA REF5	0-255	28					HPOSIA value when REF=5 of user preset signal
34SCOF	V SCROLL OF.	0-31	–					Every wide screen: V scroll offset
35S0OF	bit 0 of V SCROLL OF.	0-1	–					Every wide screen: V scroll offset (bit 0)
36SCRS	V SCROLL Standard value	0-63	–					Every wide screen: V scroll standard value
37S0RS	bit 0 of V SCROLL Standard value	0-1	–					Every wide screen: V scroll standard value(bit 0)

MID2 (CXD2072Q RGB (4))

Item Display	Register Name	Range	Standard Values					Typical Standard Values
			VGAT85	OTHERS	REF=3	REF=4	REF=5	
0 HSIZ	HSIZEA	0-255	A0					Every input signal: H size adj. (NTSC)
1 VGAH	VGAHS	0-127	20		1E	1E	2E	Every input signal polarity + Wide screen: H size adj. (RGB)
2 HPOS	HPOSIA	0-255	26		27	26	2E	Every input signal: H position adj. (READ)
3 VSIZ	VSIZEA	0-255	3		F0	F0	3	Every input signal polarity + Wide screen: V size adj.
4 VPOS	VPOSIA	0-255	3A		1E	1E	1E	Every input signal: V position adj. (READ)
5 HPHS	HPHASA	0-255	41		48	4C	48	Every input signal polarity + Wide screen: H posi adj. (WRITE)
6 VPHS	VPHASA	0-255	6		2	8	5	Every input signal polarity + Wide screen: V posi adj. (WRITE)
7 WONA	WONA	0-1	0					Every input signal: MOVIE/STILL switching
8 OSCA	OSCA	0-1	1					Every input signal: Masking range switching
9 DLYA	DELAYA	0-7	3					Every input signal: Color difference delay adj. (INPUT)
10HVSW	HVSW	0-3	1					Every input signal: Output Sync signal switching
11YSDY	YSDY	0-7	1					Every input signal: YS delay adj.
12DLY	DELAY	0-7	4					Every input signal: Color difference delay adj. (OUTPUT)
13HBLK	HBLK	0-255	A0					Every input signal: H blanking adj.
14VBLK	VBLK	0-255	0C		30	30	30	Every input signal: V blanking adj.
15IPVA	IPVA	0-1	0					Every input signal: Vertical linear interpolation
16OFST	OFFSET	0-255	0					Every input signal: Linear interpolation offset setting
17VSCA	VSCA	0-1	1		0	0	1	Every input signal: A ch vertical size
18OSVA	OSVA	0-1	1					Every input signal: A ch vertical offset
19PLL1	PLL1	0-7	4					Every input signal: PLL 1 frequency dividing ratio setting
20YUV	YUV	0-3	1					Every input signal: YUV signal sampling ratio
21REF	REF	0-7	5		3	4	5	Every input signal: V size reference value
22CLPD	CLPDA	0-255	6A					Every input signal: A ch clamp position adj.
23HPH0	bit 0 of HPHASA.	0-1	1		0	0	0	Every input signal polarity + Wide screen: H posi adj. (WRITE)
24HPH0	bit 0 of VPHASA	0-1	0					Every input signal polarity + Wide screen: V posi adj. (WRITE)
25HCOF	H CENT OF.	0-63	26		33	33	33	Every input signal: H center offset
26H0OF	bit 0 of H CENT OF.	0-1	1		0	0	0	Every input signal: H center offset (bit 0)
27VCOF	V CENT OF.	0-63	0					Every input signal: V center offset
28V0OF	bit 0 of V CENT OF.	0-1	0					Every input signal: V center offset (bit 0)
29HSOF	H SIZE OF.	0-63	10		18	18	18	Every input signal: H size offset
30VSOF	V SIZE OF.	0-255	EB		E7	E7	EB	Every input signal: V size offset
31HPR3	HPOSIA REF3	0-255	28					HPOSIA value when REF=3 of user preset signal
32HPR4	HPOSIA REF4	0-255	25					HPOSIA value when REF=4 of user preset signal
33HPR5	HPOSIA REF5	0-255	28					HPOSIA value when REF=5 of user preset signal
34SCOF	V SCROLL OF.	0-31	–					Every wide screen: V scroll offset
35S0OF	bit 0 of V SCROLL OF.	0-1	–					Every wide screen: V scroll offset (bit 0)
36SCRS	V SCROLL Standard value	0-63	–					Every wide screen: V scroll standard value
37S0RS	bit 0 of V SCROLL Standard value	0-1	–					Every wide screen: V scroll standard value(bit 0)

AP (TA8776N)

Item Display	Register Name	Range	Standard Values	Typical Standard Values
0 SBAS	SUB_BASS	0-63	10	10
1 STRE	SUB_TRABLE	0-63	2	2

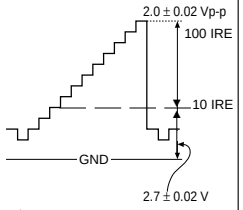
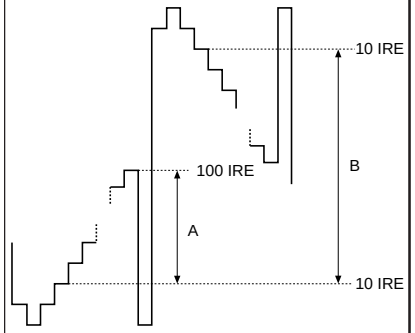
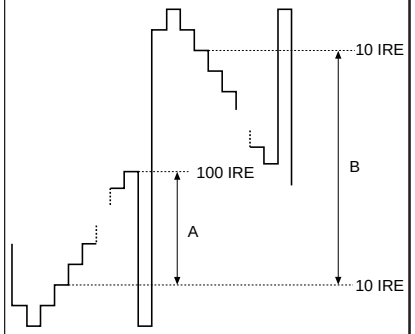
OP (Others)

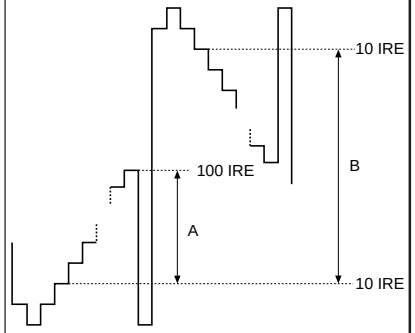
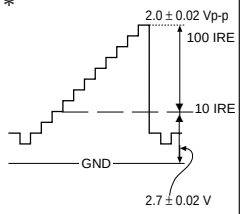
Item Display	Register Name	Range	Standard Values		Typical Standard Values
0 OSDH	Display H Position	0-63	10 (VIDEO)	7(RGB)	2 Kinds (VIDEO, RGB)
1 OSDV	Display V Position	0-63	7 (VIDEO)	7(RGB)	2 Kinds (VIDEO, RGB)
2 ASHT	Auto Shut Off	0,1	Not used		0: OFF, 1: ON
3 CPWR	CH Power ON		Not used		Not used
4 AGCH	AGC Voltage High	0-15	Not used		Not used
5 AGCL	AGC Voltage Low	0-15	Not used		Not used
6 DBSS	DBS Category Yes/No		Not used		Not used
7 EDCK	EDTV FULL Mode Detection	0,1	Not used		Not used
8 AION	AI AUTO	0,1	Not used		Not used
9 K	Picture Adjusting Variable K	0-7	1		Don't set "0" (Actual value is 1/8~7/8)
10 L	Picture Adjusting Variable L	0-7	0		0~7 is converted into 1~8 in actual use.
11 LENS	Display only	0	–		Lens focus adj.
12 PANEL	0:Green, 1:Red, 2:Blue, 3:White	0-3	–		Panel position adj.
13 WHITE	APL	0-1	–		White balance adj. (0: GAIN, 1: BIAS)
14 WIND	Display only	0	–		Window signal
15 STEP	Display only	0			00: Normal, 01: Pattern 1, 02: Pattern 2
16 EDFL	EDTV FULL Detection ON	0,1	Not used		Not used
17 BC	g_bs_search [0]	1-15	Not used		Not used
18 TIME	Lamp Counting Timer				Current time count and 0 time are displayed alternately with UP/DOWN
19 FMTL	fh of distinction difference range	0			± ((3+FHTL) ×0.2) kHz
20 FVTL	fv of distinction difference range	0			± (1.0+FVTL) Hz
21HV1	Threshold of scanning line distinction (low)	0-15			(505+ (5×HV1)) lines
22 HV2	Threshold of scanning line distinction (high)	0-15			(555+ (5×HV2)) lines
23 MINH	fh of the frequency correspond to MIN	0-31			20+ ((3+FHTL) ×0.2) kHz
24 MAXH	fh of the frequency correspond to MAX	0-31			42+ ((3+FHTL) ×0.2) kHz
25 MINV	fv of the frequency correspond to MIN	0-15			(42+MINV) Hz
26 MAXV	fv of the frequency correspond to MAX	0-15			(77+MAXV) Hz
27 FHAG	Equivalence frequency of fh changed detection	0-15			FHAG (20×FHAGms)
28 FVAG	Equivalence frequency of fv changed detection	0-15			FHAG (20×FVAGms)
29 NSAG	Equivalence frequency of non-signal detection (on signal)	0-15			Not used
30 FHMJ	fh difference range of before the signal distinction	0-7			± ((1+FHMJ) ×0.2) kHz
31 FVMJ	fv difference range of before the signal distinction	0-7			± ((3+FVMJ)

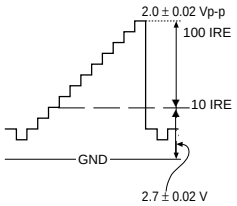
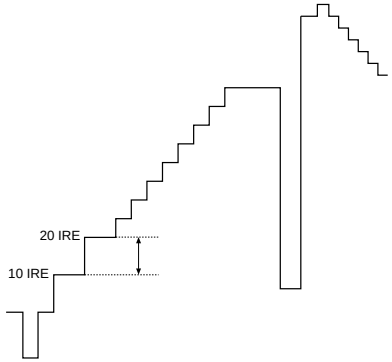
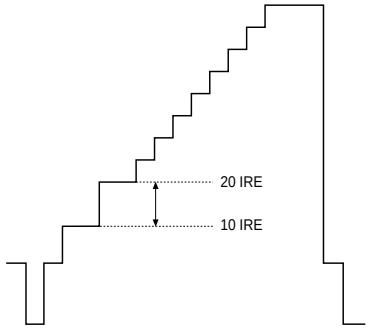
TP (Model Discrimination)

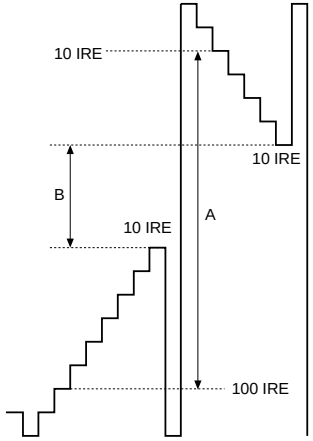
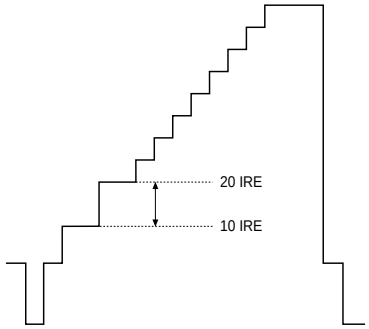
Item Display	Register Name	Range	Standard Values	Typical Standard Values
0 WIDE	HH	0,1	Not used	
1 TIME	TIMER	0,1	0,1	Fan stop time switching 0: 10 min (normal), 1: 10 sec
2 KL37	KL-W7000 model	0,1	0,1	0: KL-W9000 1: KL-W7000

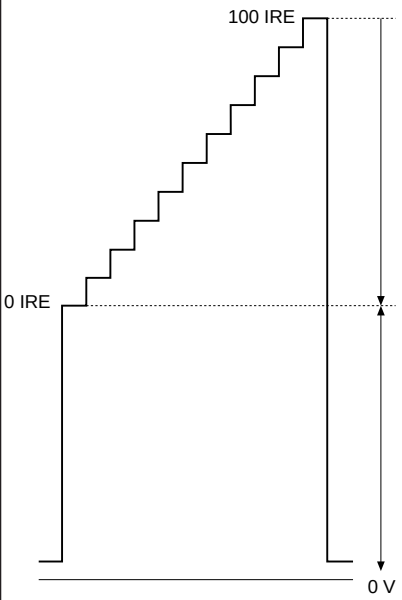
Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
C Board Adjustment 1. PLL fo adjustment 1) WIDE mode 1. Select WIDE mode. 2. Open the CN5202 pin 1, H.SYNC input. 3. Connect *IC5004 pin 2 to the GND (*TP5009) via 100Ω resistance. 4. Connect *frequency counter to the pin 1 of *IC5004. 5. Adjust *L5002 so as to satisfy the *specified value. 6. Input H.SYNC for NT double speed, and confirm the waveform at the *TP with *oscilloscope. 2) NORMAL mode 1. Select NORMAL mode. 2. Open the CN5202 pin 1, H.SYNC input. 3. Connect *IC5004 pin 2 to the GND (*TP5009) via 100Ω resistance. 4. Connect *frequency counter to the pin 1 of *IC5004. 5. Adjust *L5004 so as to satisfy the *specified value. 6. Input H.SYNC for NT double speed 7. Confirm the waveform at the *TP5004 with *oscilloscope.	* NTSC signal * Frequency counter * Double speed NTSC * Oscilloscope * NTSC signal * Frequency counter * Double speed NTSC * Oscilloscope	* IC5004 pin 2 * TP5009 Jig land * IC5004 * TP5007 (RPD2) * IC5004 pin 2 * IC5009 * IC5004 pin 1 * TP5007 (RPD1)	* L5002 * L5004	* 13.67±0.10MHz * 2.3±0.3 V (Use TP5009 as reference GND.) * 10.22±0.05MHz * 5.0Vp-p 2.39±0.1µs 31.78µs (Use TP5009 as reference GND.)

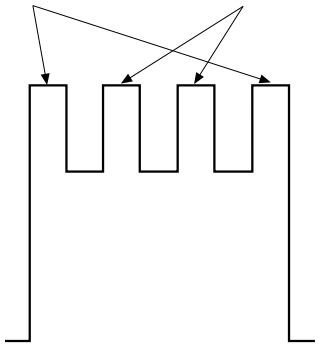
Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
2. IC Level Adjustment 1. Using *I²C bus encoder, set the NT-WIDE mode. 2. Enter NT double speed 10-step signal of bias 2.2V and amplitude 1.8Vp-p to the CN5201 pins 2~4.	*I²C bus encoder *  (Use TP5201, TP5401 and TP5601 as reference GND respectively.)			
1) R channel 1. Using *DC power, apply 0V to *TP5211.	* DC power	* TP5211 [RLBS] TP5207 is ref. GND * TP5203 [R-SIG2]		* A : 1.35±0.02Vp-p * B : 5.70±0.02Vp-p
2. Connect *oscilloscope to *TP5203, and adjust *RV5205 so that 10 IRE ~ 100 IRE (A) becomes *1.35±0.02Vp-p. 3. Adjust *RV5201 so that the forward 10 IRE ~ reverse 10 IRE (B) becomes *5.70±0.02Vp-p at *TP5203.	* Oscilloscope	* TP5203 [R-SIG2] * TP5411 [GLBS] TP5407 is ref. GND	* RV5205 [R. GAIN] * RV5201 [R. BIAS]	
4. Confirm that a difference in voltage amplitude of forward 10 IRE ~ 100 IRE and forward 10 IRE ~ reverse 10 IRE between waveform at *TP5202,*TP5204 and waveform at *TP5203 is within ±150mV.		* TP5202 [R-SIG1] * TP5204 [R-SIG3] * TP5203 [R-SIG2]		
2) G channel 1. Using *DC power, apply 0V to *TP5411.	* DC power * Oscilloscope			
2. Connect *oscilloscope to *TP5403, and adjust *RV5407 so that 10 IRE ~ 100 IRE (A) becomes *1.35±0.02Vp-p. 3. Adjust *RV5403 so that the forward 10 IRE ~ reverse 10 IRE (B) becomes *6.10±0.02Vp-p at *TP5403.		* TP5403 [G-SIG2] * TP5403 [G-SIG2]		
4. Confirm that a difference in voltage amplitude of forward 10 IRE ~100 IRE and forward 10 IRE~ reverse 10 IRE between waveform at *TP5602, *5604 and waveform at *TP5603 is within ±150mV.		* TP5402 [G-SIG1] * TP5404 [G-SIG3] * TP5403 [G-SIG2]	* RV5407 [G. GAIN] * RV5403 [G. BIAS]	* A : 1.35±0.02Vp-p * B : 6.10±0.02Vp-p

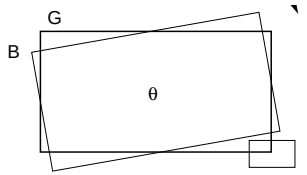
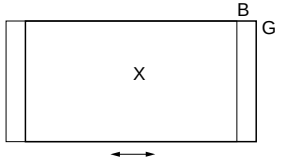
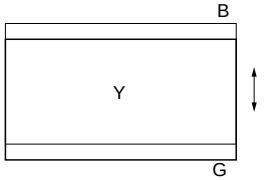
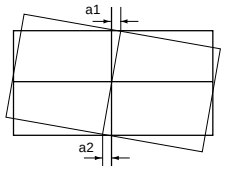
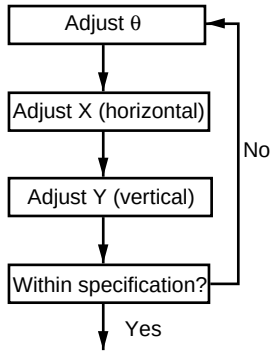
Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
3) B channel 1. Using *DC power, apply 0V to *TP5611.	* DC power	* TP5611 [BLBS] * TP5607 is Ref. GND		
2. Connect *oscilloscope to *TP5603, and adjust *RV5605 so that 10 IRE ~ 100 IRE (A) becomes *1.35±0.02Vp-p.	* Oscilloscope	* TP5603 [B-SIG2]	* RV5605 [B. GAIN]	* A : 1.35±0.02Vp-p
3. Adjust *RV5601 so that the forward 10 IRE ~ reverse 10 IRE (B) becomes *5.90±0.02Vp-p at *TP5603.		* TP5603 [B-SIG2]	* RV5601 [B. BIAS]	* B : 5.90±0.02Vp-p
4. Confirm that a difference in voltage amplitude of forward 10 IRE ~ 100 IRE and forward 10 IRE ~ reverse 10 IRE between waveform at *TP5602,*TP5604 and waveform at *TP5603 is within ±150mV.		* TP 5602 [B-SIG1] * TP5604 [B-SIG3] * TP5603 [B-SIG2]		
4. Vcom Adjustment • *Using *I²C bus encoder, set the NT-WIDE mode. • *Enter NT double speed 10-step signal of *bias 2.2V and amplitude 1.8Vp-p to the CN5201 pins 2~4.	*I²C bus encoder *  (Use TP5201, TP5401 and TP5601 as reference GND respectively.)			
1. Measure voltage at the *TP5203 with digital voltmeter.	* Voltmeter	* TP5203 [Rch OUT]		* (Value in 1) – 0.60±0.02V
2. Adjust *RV5202 so that the voltage at *TP5205 becomes *(Value in 1) – 0.60±0.02V.		* TP5205 [R-Vcom OUT]	* RV5202 [R.VCOM]	
3. Measure voltage at the *TP5403 with digital voltmeter.	* Voltmeter	* TP5403 [Gch OUT]		

Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
3. r Curve Adjustment • C board input signal level setting 1. Using *I²C bus encoder, set the NT-WIDE mode. 2. Enter *NT double speed (10 step) signal of bias 2.2V and amplitude 1.8Vp-p to the CN5201 pins 1~3. • After adjusting the amplitude of 1.8V, adjust the bias level of 2.2V. • R channel 1. Connect *oscilloscope to *TP5203. 2. *DC power, apply 3.60±0.02V to *TP5211. 3. Adjust *RV5203 so that 10 IRE ~ 20 IRE becomes *600±20mV. Adjustment is no good when 0 IRE ~10 IRE voltage is below 100 mV. 4. Confirm that forward 10 IRE ~ reverse 10 IRE voltage is over 6.5V. • G channel 1. Connect *oscilloscope to *TP5403. 2. *DC power, apply 3.60±0.02V to *TP5411. 3. Adjust *RV so that 10 IRE ~ 20 IRE becomes *700±20mV. 4. Stop the voltage application to *TP5411.	* I²C bus encoder *  (Use TP5201, TP5401 and TP5601 as reference GND respectively.) * Oscilloscope * DC power *TP5411 [GLBS]	* TP5203 [R-SIG2] * TP5211 [RLBS] * TP5207 is Ref. GND * TP5403 [R-SIG2] * TP5411 [GLBS] *RV5405 [GL.GAIN]	*RV5403 [RL. GAIN]	 * 10 IRE~20 IRE : 600±20 mV  * 10 IRE~20 IRE : 600±20 mV

Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
5. Adjust *RV so that the forward 10 IRE ~ reverse 10 IRE (A) becomes *8.30±0.02Vp-p. Adjustment is no good when 0 IRE ~ 10 IRE voltage is below 100mV. 6. Confirm that forward 100 IRE ~ reverse 100 IRE (B) is *3.45±0.10Vp-p.			* RV5402 [GL. BIAS]	 * A : 8.30±0.02Vp-p * B : 3.45±0.10Vp-p
• B channel 1. Connect *oscilloscope to *TP5603. 2. *DC power, apply 3.60±0.02V to *TP5611. 3. Adjust *RV so that 10 IRE ~ 20 IRE becomes *800±20mV. Confirm that 0 IRE ~ 10 IRE voltage is over 7.1V.	* Oscilloscope * DC power	* TP5603 [B-SIG2] * TP5411 [GLBS]	* RV5603 [GL. GAIN]	 * 10 IRE ~20IRE : F800 : 20mV

Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
4. Adjust *RV5404 so that the voltage at *TP5405 becomes *(Value in 3) –0.50±0.02V.		* TP5405 [G.VCOM OUT]	* RV5404 [G.VCOM]	* (Value in 3) – 0.50±0.02V
5. Measure voltage at the *TP5603 with digital voltmeter.	* Voltmeter	* TP5603 [Bch OUT]		* (Value in 5) – 0.80±0.02V
6. Adjust *RV5602 so that the voltage at *TP5605 becomes *(Value in 5) – 0.80±0.02V.		* TP5605 [B-VCOM OUT]	* RV5602[B.VCOM]	
A Board Adjustment				
1. Enter *1Vp-p 10-step signal from the Video1 input.	* NTSC 10-step signal			
2. Set the user control to the RESET of *AV MEMORY, *PIX to maximum, and H WHITE to OFF.			* AV MEMORY * RESET	
3. Connect *oscilloscope to *TP4002.	* Oscilloscope	* TP4002 [2G]	* H WHITE OFF	

Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
4. In the SERVICE mode, adjust *CXA1839 No.6 SPC2 so that 0 IRE ~ 100 IRE becomes almost 2.0Vp-p. 5. In the same manner, adjust *CXA1839 No.1 SBRT so that the 0IRE level becomes 2.8Vdc. 6. Save the data.			* CXA1839 No6. SPC2 * CSA1839 No1. S BRT	* 0 IRE-100IRE : 2.0Vp-p * 0 IRE : 2.8Vdc
1. Hue and Color Adjustment (NTSC) 1. Enter 75% Full Field Color Bar from the RGB1 input. 2. Connect *oscilloscope to *TP4003. 3. In the SERVICE mode, adjust *CXA1839 No.7 SCL2 so that the peak level of two pulses on both sides becomes almost equal. 4. In the same manner, adjust *CXA1839 No.0 SHUE so that the peak level of central two pulses becomes almost equal. 5. Save the data.	* 75% Full Field Color Bar * Oscilloscope	* TP4003 [2B]	* CXA1839 No7. SCL2 * CXA1839 No0. SHUE * CXA1839 No7. SCL2	* Adjust No.7 SCL2 to attain same level * Adjust No.0 SHUE to attain same level 

Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
Registration Adjustment Preparation • Projected picture size ..... 49.1 inch • Projection distance ..... 726.2 mm • Aspect ratio ..... 16:9 • Picture quality adjusting menu ... Standard Note: To make the registration adjustment The registration locking blocks are fixed with an adhesive, thus requiring the registration adjusting block kit for service (4-047-337-01). • Tools and Kit Hex. wrench keys (2mm, 5mm) 1. Enter G monochrome crosshatch signal and also B monochrome crosshatch signal, then adjust registration between G and B. Adjusting regi. adjusting screws in the order of θ → X → Y, overlap the B picture on the G picture as shown in figure. 2. Enter all black signal to the B panel and also R monochrome crosshatch signal, then adjust the registration between R and G. 3. Tighten tentatively the registration locking screws on the R and B panels, and fix the registration blocks A and B with an adhesive. 4. Tighten the regi. locking screws. To replace G panel 1. Attach the G panel. 2. Enter G monochrome crosshatch signal. 3. Confirm that the center vertical line of crosshatch and that of screen almost coincide. 4. Loosen two screws on the θ G panel, insert an adjusting rod into a θ adjusting hole and rotate it to adjust the θ within specification. 5. Adjust registration of R and B.	NTSC signal generator		θ adjusting screw X adjusting screw Y adjusting screw	 Rotate with respect to the bottom right    a1+a2=Less than 1.3mm 

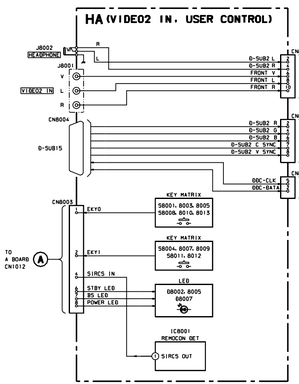
Adjustment Items and Procedure	Tools and Signals	Test Points	Adjustment Places	Illustration Waveforms and Values
White Balance Adjustment Preparation Set as follows. PIX : 90% BRT = CENT H WHITE = OFF	NTSC signal generator Color & chromaticity meter (Minolta CS-100)			
1. NTSC and RGB mode color temperature ... HIGH 1) Set the color temperature to "H", and enter *30 IRE flat field signal to the input, and select the SERVICE mode. 2) White balance in SERVICE mode Adjust *RCOI and BCOI to satisfy the specification. (WB: For GCOI, fix to 31)	* NTSC 30 IRE	WB meter		(NTSC 30 IRE) W7000 W9000 *X : 0.257 ±0.005 0.257±0.005 Y : 0Z.281±0.005 0.281±0.005 (VGA 30 IRE) W7000 W9000 *X : 0.248 ±0.005 0.248±0.005 Y : 0.265±0.005 0.265±0.005
3) Enter *70 IRE flat field signal to the input, and select the SERVICE mode. Adjust *CXA2011 No.5 RDOF and No.7 BDOF to satisfy the specification. (Fix CXA2011 No.6 GDOF to 31)	* NTSC 70 IRE		* SERVICE mode WB RCOI WB BCOI * SERVICE mode CXA2011 No. 5 RDOF CXA2011 No. 7 BDOF	(NTSC 70 IRE) W7000 W9000 *X : 0.267 ±0.003 0.267±0.003 Y : 0.293 ±0.003 0.293±0.003 (VGA 70 IRE) W7000 W9000 *X : 0.251 ±0.003 0.251±0.003 Y : 0.276 ±0.003 0.276±0.003
4) Repeating the steps 2) and 3), adjust so that 30 IRE and 70 IRE satisfy the specification. 5) Enter *10 IRE flat field signal to the input, and select the SERVICE mode. Adjust *BIAS3 No.00 RLBS and No.01 BLBS to satisfy the specification.	* NTSC 10 IRE			(NTSC 10 IRE) W7000 W9000 *X : 0.276 0.266 Y : 0.289 0.265 (VGA 10 IRE) W7000 W9000 *X : 0.271 0.253 Y : 0.275 0.263
6) In the SERVICE mode, set CXA1839 No.12 Y-DC to "1", and CXA1839 No.13 DPIX to "2". 7) Enter 10-step signal to the input, and confirm that the color at each step of 0 IRE to 100 IRE is homogeneous and not extremely different from other parts. 8) Save the data.	*NTSC 10 STEP		* SERVICE mode BIAS3 No00. RLBS BIAS3 No01. BLBS * SERVICE mode CXA1839 No. 12 Y-DC CXA1839 No. 13 DPX	
Lens Focus Adjustment 1) Loosen a focus locking screw. 2) Adjust the lens focus.				

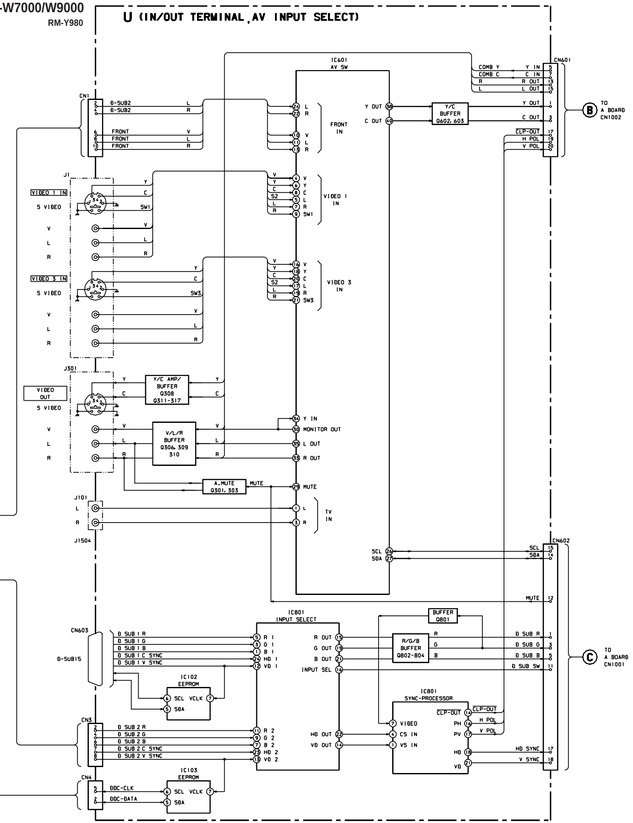
SECTION 4
DIAGRAMS

4-1. BLOCK DIAGRAMS

KL-W7000/W9000
RM-Y980

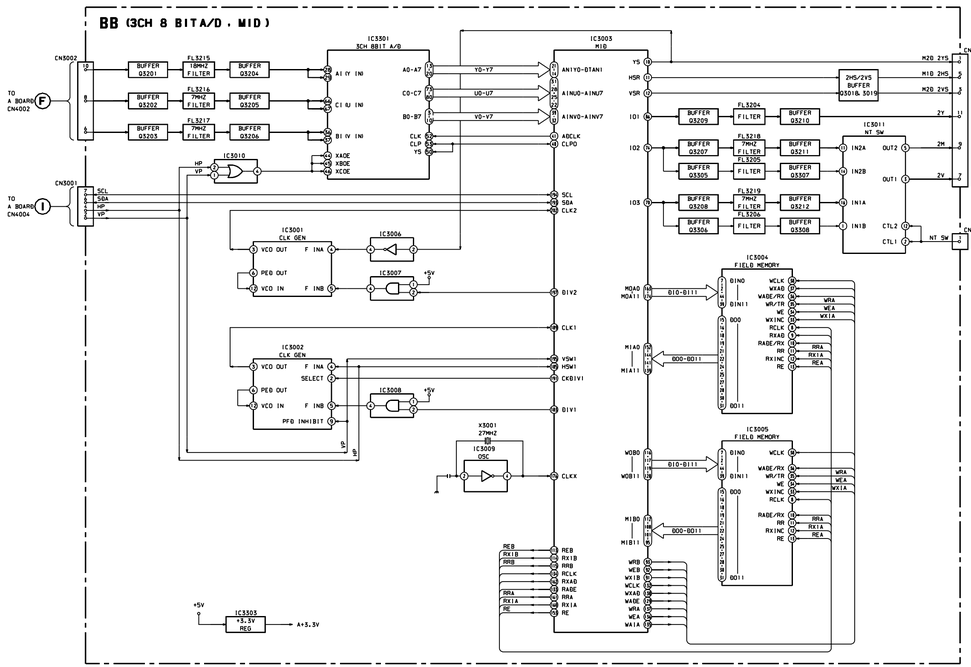
KL-W7000/W9000
RM-Y980

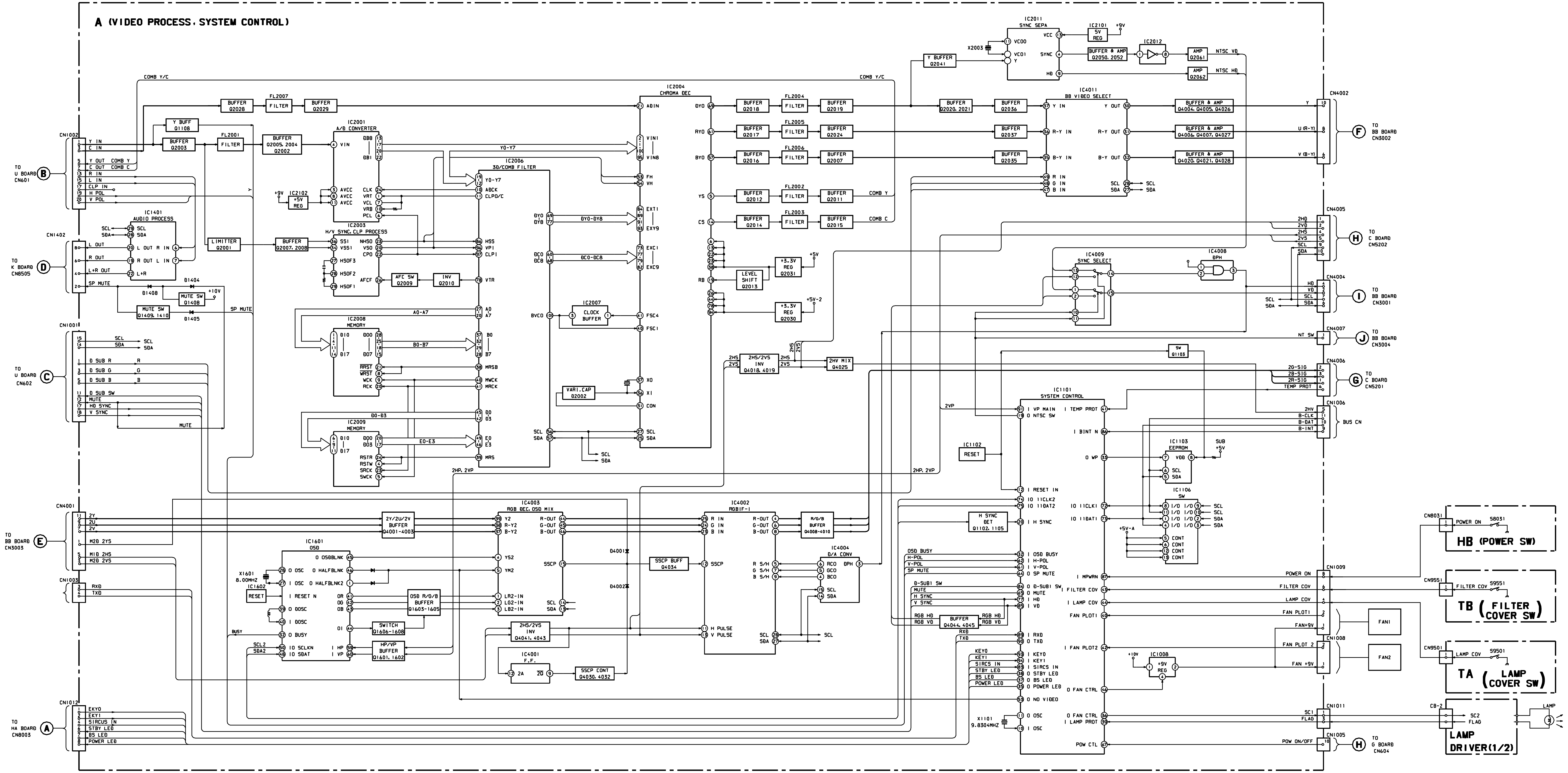




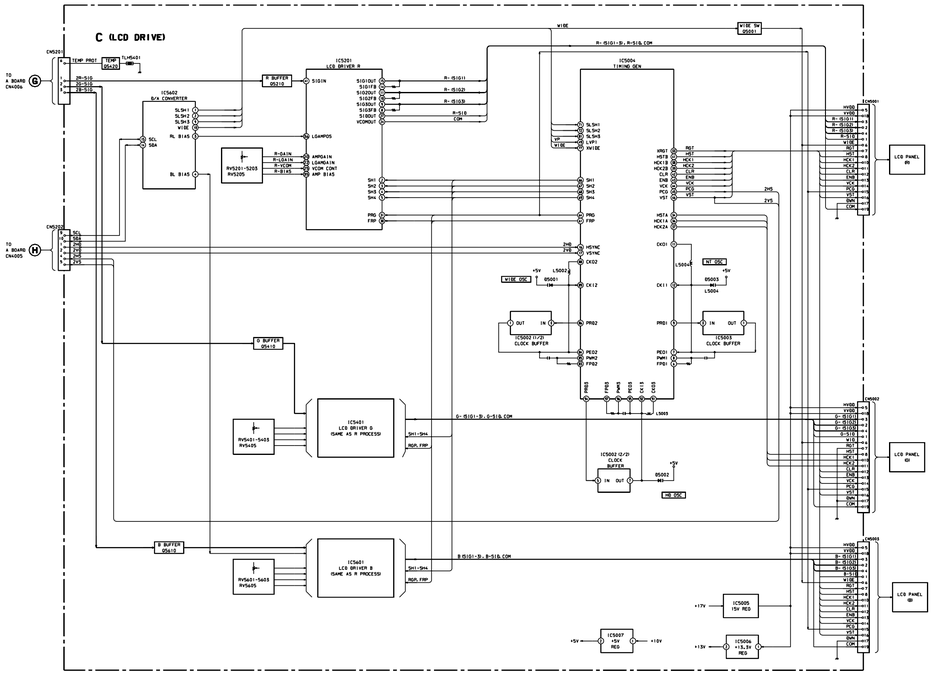
KL-W7000/W9000
RM-Y980

KL-W7000/W9000
RM-Y980

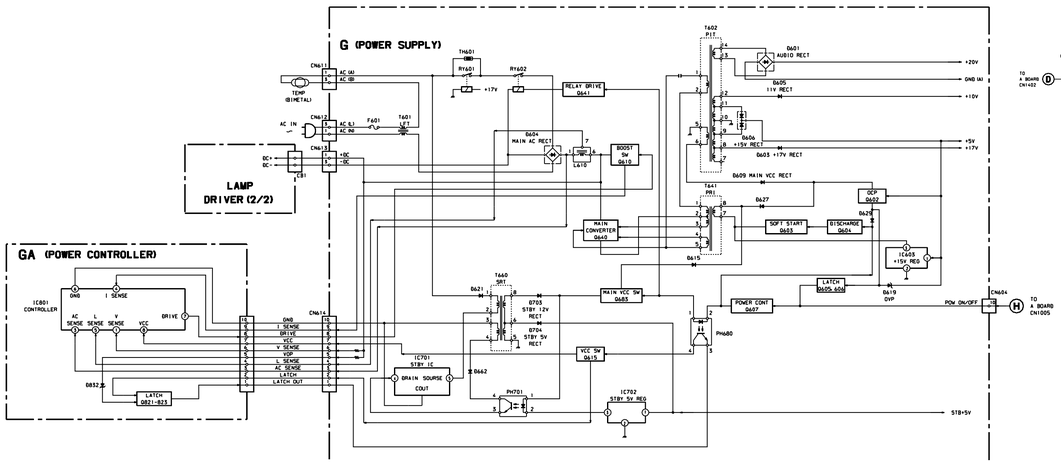


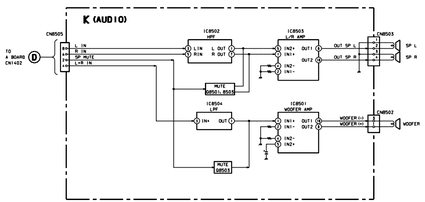

A (VIDEO PROCESS, SYSTEM CONTROL)
HB (POWER SW)
TB (FILTER COVER SW)
TA (LAMP COVER SW)
LAMP DRIVER(1/2)

KL-W7000/W9000
RM-Y980



KL-W7000/W9000
RM-Y980
KL-W7000/W9000
RM-Y980



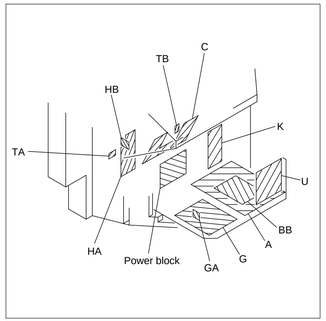


MEMO

KL-W7000/W9000
RM-Y980

MEMO

4-2. CIRCUIT BOARDS LOCATION



KL-W7000/W9000
RM-Y980

4-3. SCHEMATIC DIAGRAMS AND PRINTED WIRING BOARDS

Note:

- All capacitors are in µF unless otherwise noted. (pF: µµF) Capacitors without voltage indication are all 50 V.
- Indication of resistance, which does not have one for rating electrical power, is as follows.

  Pitch: 5 mm
  Rating electrical power 1/4 W (CHIP : 1/10 W)

- All resistors are in ohms.
- : nonflammable resistor.
- : fusible resistor.
- : internal component.
- : panel designation, and adjustment for repair.
- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.
- : earth-ground.
- : earth-chassis.
- All voltages are in V.
- Readings are taken with a 10 M digital multimeter.
- Readings are taken with a color-bar signal input.
- Voltage variations may be noted due to normal production tolerances.

  ∗ : Can not be measured.
- Circled numbers are waveform references.
- : B + bus.
- : B – bus.
- : Signal path.

Reference information

RESISTOR	: RN	METAL FILM
	: RC	SOLID
	: FPRD	NONFLAMMABLE CARBON
	: FUSE	NONFLAMMABLE FUSIBLE
	: RW	NONFLAMMABLE WIREWOUND
	: RS	NONFLAMMABLE METAL OXIDE
	: RB	NONFLAMMABLE CEMENT
COIL	: LF-BL	MICRO INDUCTOR
CAPACITOR	: TA	TANTALUM
	: PS	STYROL
	: PP	POLYPROPYLENE
	: PT	MYLAR
	: MPS	METALIZED POLYESTER
	: MPP	METALIZED POLYPROPYLENE
	: ALB	BIPOLAR
	: ALT	HIGH TEMPERATURE
	: ALR	HIGH RIPPLE

Note: The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Note: Les composants identifiés par un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une pièce portant le numéro spécifié.

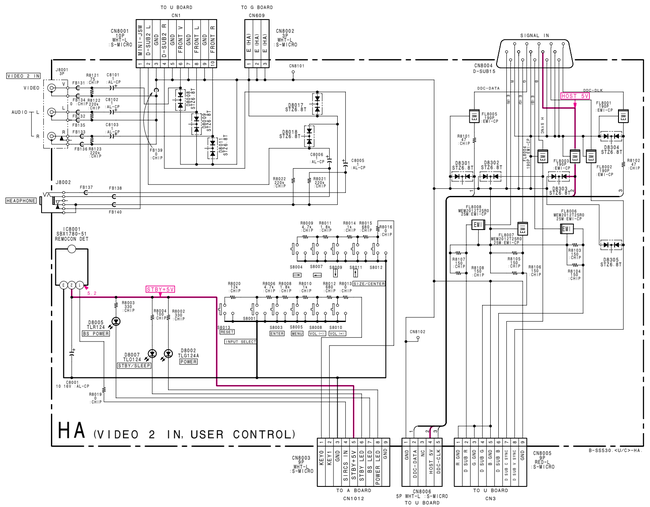
Terminal name of semiconductors in silk screen printed circuit (※)

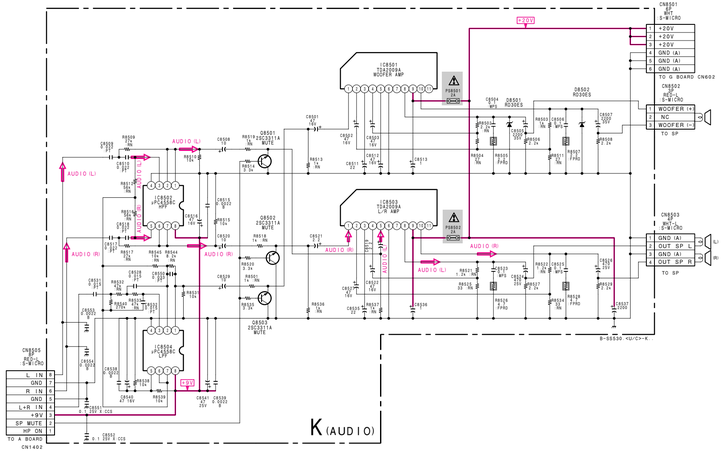
	Device	Printed symbol	Terminal name	Circuit
①	Transistor		Collector / Base / Emitter	
②	Transistor		Collector / Base / Emitter	
③	Diode		Cathode / Anode	
④	Diode		Cathode / Anode (NC)	
⑤	Diode		Cathode / Anode (NC)	
⑥	Diode		Common Anode / Cathode	
⑦	Diode		Common Anode / Cathode	
⑧	Diode		Common Anode / Anode	
⑨	Diode		Common Anode / Anode	
⑩	Diode		Common Cathode / Cathode	
⑪	Diode		Common Cathode / Cathode	
⑫	Transistor (FET)		Drain / Source / Gate	
⑬	Transistor (FET)		Drain / Source / Gate	
⑭	Transistor (FET)		□ Source □ Drain □ Gate	
⑮	Transistor		□ Emitter □ Collector □ Base	
⑯	Transistor		C1(B1)E1 / E2(B2)C2	
⑰	Transistor		C1(B2)E2 / E1(B1)C2	
⑱	Transistor		C1 B2 E2 / E1 B1 C2	
⑲	Transistor		C1 B2 E2 / E1 B1 C2	
⑳	Transistor		E2 B1 B2 / C2 C1(B2)	
㉑	Transistor		E2 B1 E1 / C2 C1(B2)	
㉒	Transistor		E2 B1 B2 / C2 E1	
–	Discrete semiconductor			

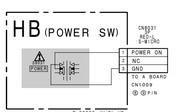
(Chip semiconductors that are not actually used are included.)

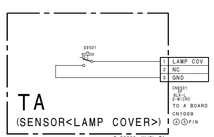
Ver.1.2

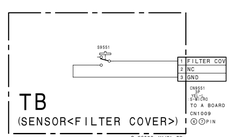
(1) Schematic Diagrams of HA, HB, K, TA and TB Boards









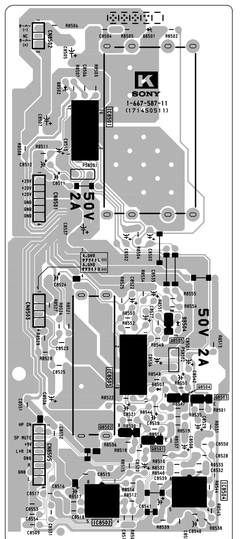


• K BOARD VOLTAGE LIST

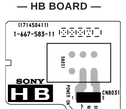
Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]
IC8501	1	1.5		5	1.5
	2	0.9		9	10.7
	3	12.2		10	10.6
	4	0.9	IC8504	1	4.8
	5	1.5		2	4.8
	8	10.5		3	4.7
	10	10.6		5	4.8
IC8502	1	4.8		6	4.8
	2	4.8		7	4.8
	3	4.8	Q8501	B	0.5
	5	4.8		E	0
	6	4.8	Q8502	B	0.5
	7	4.8		E	0
IC8503	1	1.5	Q8503	B	0.5
	2	0.9		E	0
	3	12.2			
	4	0.9			

K [AUDIO] HB [POWER SW]

— K BOARD —

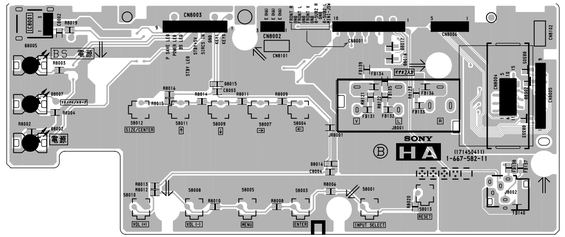


— HB BOARD —

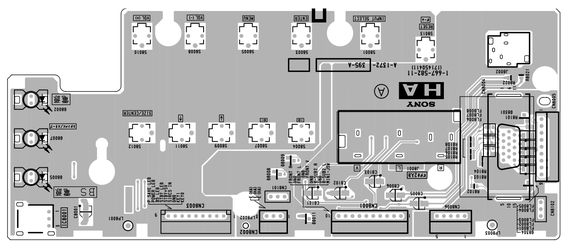


HA [VIDEO2 IN, USER CONTROL] TA [SENSOR <LAMP COVER>] TB [SENSOR <FILTER COVER>]

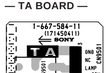
— HA BOARD (Conductor Side) —



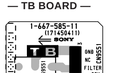
— HA BOARD (Component Side) —



— TA BOARD —



— TB BOARD —



HA BOARD
Terminal name of semiconductors in silk screen printed circuit (✻)

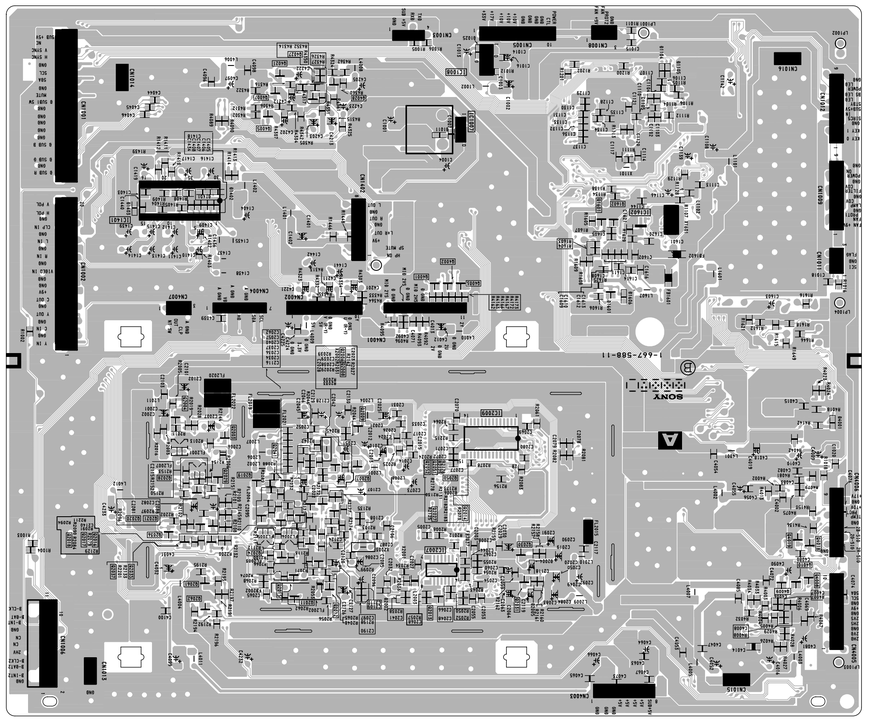
Ref.	✻
D8017, D8018, D8302, D8303, D8305	Ⓑ
D8008, D8009, D8011, D8301, D8304	Ⓐ

✻: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 54)

KL-W7000/W9000
RM-Y980

A SYSTEM CONTROL, VIDEO PROCESS

— A BOARD (Conductor Side) —



Schematic diagrams

← HA HB K TA TB boards

• A BOARD SEMICONDUCTOR LOCATION

IC

	(Conductor Side)	(Component Side)
IC1007	E–3	E–4
IC1008	E–3	E–4
IC1101		E–5
IC1102		E–5
IC1103		D–5
IC1106		D–5
IC1401	D–5	D–2
IC1601		D–5
IC1602	D–2	
IC2001		B–3
IC2003		B–2
IC2004		A–3
IC2006		B–4
IC2007	B–3	
IC2008		B–4
IC2009	B–3	
IC2011		B–3
IC2012		B–3
IC2101		A–3
IC2102		B–3
IC4001		B–6
IC4002		A–5
IC4003		C–6
IC4004		A–6
IC4008		A–2
IC4009		A–2
IC4011		E–2

TRANSISTOR

	(Conductor Side)	(Component Side) ✻
Q1101	D–5	⑨
Q1102	E–6	⑨
Q1103	D–5	⑨
Q1105	E–5	⑨
Q1108	C–1	⑨
Q1408	D–3	⑨
Q1409	D–3	⑨
Q1410	D–3	⑨
Q1601	D–2	⑨
Q1602	D–2	⑨
Q1603	C–6	⑨
Q1604	C–6	⑨
Q1605	C–6	⑨
Q1606	C–6	⑨
Q1607	C–6	⑨
Q1608	C–6	⑨
Q2001	C–2	⑨
Q2002	C–3	⑨
Q2003	B–5	⑨
Q2004	C–5	⑨
Q2005	B–2	⑨
Q2007	B–4	⑨
Q2008	B–4	⑨
Q2009	B–4	⑨
Q2010	B–3	⑨
Q2011	A–4	⑨
Q2012	A–4	⑨
Q2013	A–3	⑨
Q2014	B–4	⑨
Q2015	A–4	⑨
Q2016	B–4	⑨
Q2017	B–4	⑨
Q2018	B–5	⑨
Q2019	B–5	⑨
Q2020	B–5	⑨
Q2021	B–5	⑨
Q2024	B–4	⑨
Q2027	B–4	⑨
Q2028	B–5	⑨
Q2029	B–5	⑨
Q2030	B–3	⑨
Q2031	A–3	⑨
Q2035	B–5	⑨
Q2036	B–5	⑨
Q2037	B–5	⑨
Q2041	B–4	⑨
Q2050	B–4	⑨
Q2051	B–4	⑨
Q2052	B–4	⑨
Q2061	A–5	⑨
Q2062	A–5	⑨
Q4001	C–3	⑨
Q4002	C–3	⑨
Q4003	C–3	⑨
Q4004	E–2	⑨
Q4005	E–5	⑨
Q4006	E–2	⑨
Q4007	E–5	⑨
Q4008	A–1	⑨
Q4009	A–1	⑨
Q4010	A–1	⑨
Q4018	B–1	⑨
Q4019	B–1	⑨
Q4020	E–2	⑨
Q4021	E–4	⑨
Q4025	B–6	⑨
Q4026	E–3	⑨
Q4027	E–4	⑨
Q4028	E–4	⑨
Q4034	B–6	⑨
Q4041	C–3	⑨
Q4043	C–3	⑨
Q4044	A–2	⑨
Q4045	A–2	⑨

DIODE

	(Conductor Side)	(Component Side) ✻
D1011	E–3	⑨
D1025	E–3	⑨
D1031	D–6	⑨
D1032	D–6	⑨
D1102	E–5	⑨
D1103	E–5	⑨
D1104	E–2	⑨
D1105	E–2	⑨
D1401	D–5	⑨
D1402	D–5	⑨
D1405	D–3	⑨
D1406	D–3	⑨
D1407	D–2	⑨
D1408	D–3	⑨
D1601	C–2	8
D1605	C–6	⑨
D1606	C–2	⑨
D2001	B–3	⑨
D2002	A–4	⑨
D2004	B–3	⑨
D2005	A–3	⑨
D2006	B–4	⑨
D2008	B–3	⑨
D2009	B–3	⑨
D2010	B–3	⑨
D2011		⑨
D4001	C–1	⑨
D4002	B–6	⑨
D4005	B–2	⑨
D4006	B–2	⑨
D4007	B–2	⑨
D4008	B–2	⑨
D4009	B–2	⑨
D4010	B–2	⑨
D4011	B–2	⑨
D4012	B–2	⑨

CRYSTAL

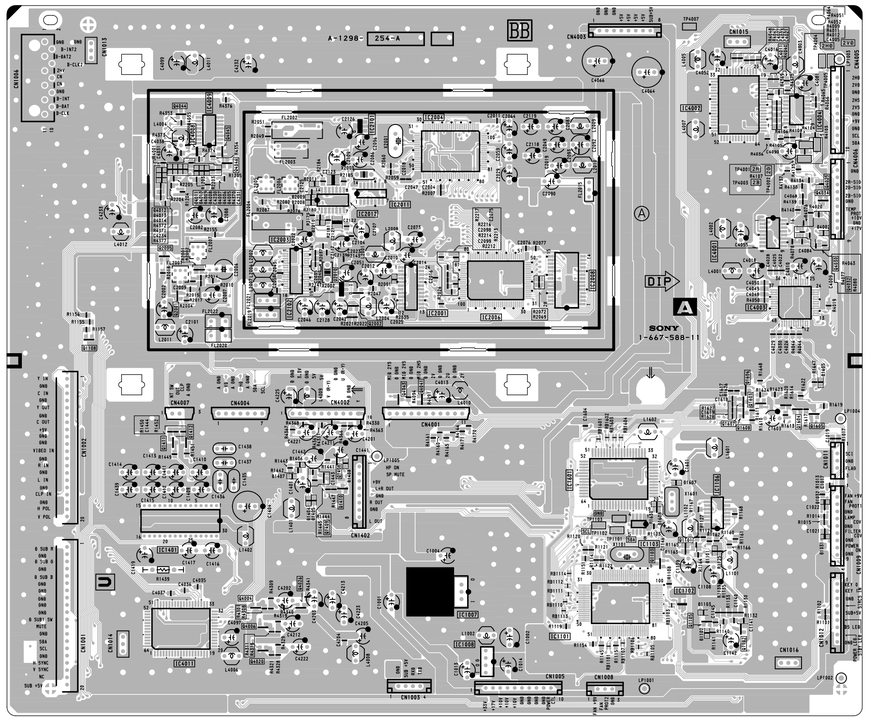
	(Conductor Side)	(Component Side)
X1101	D–2	D–5
X1601	D–2	D–5
X2001	A–4	A–3
X2002	B–4	B–3
X2003	B–4	B–3

✻: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 54)

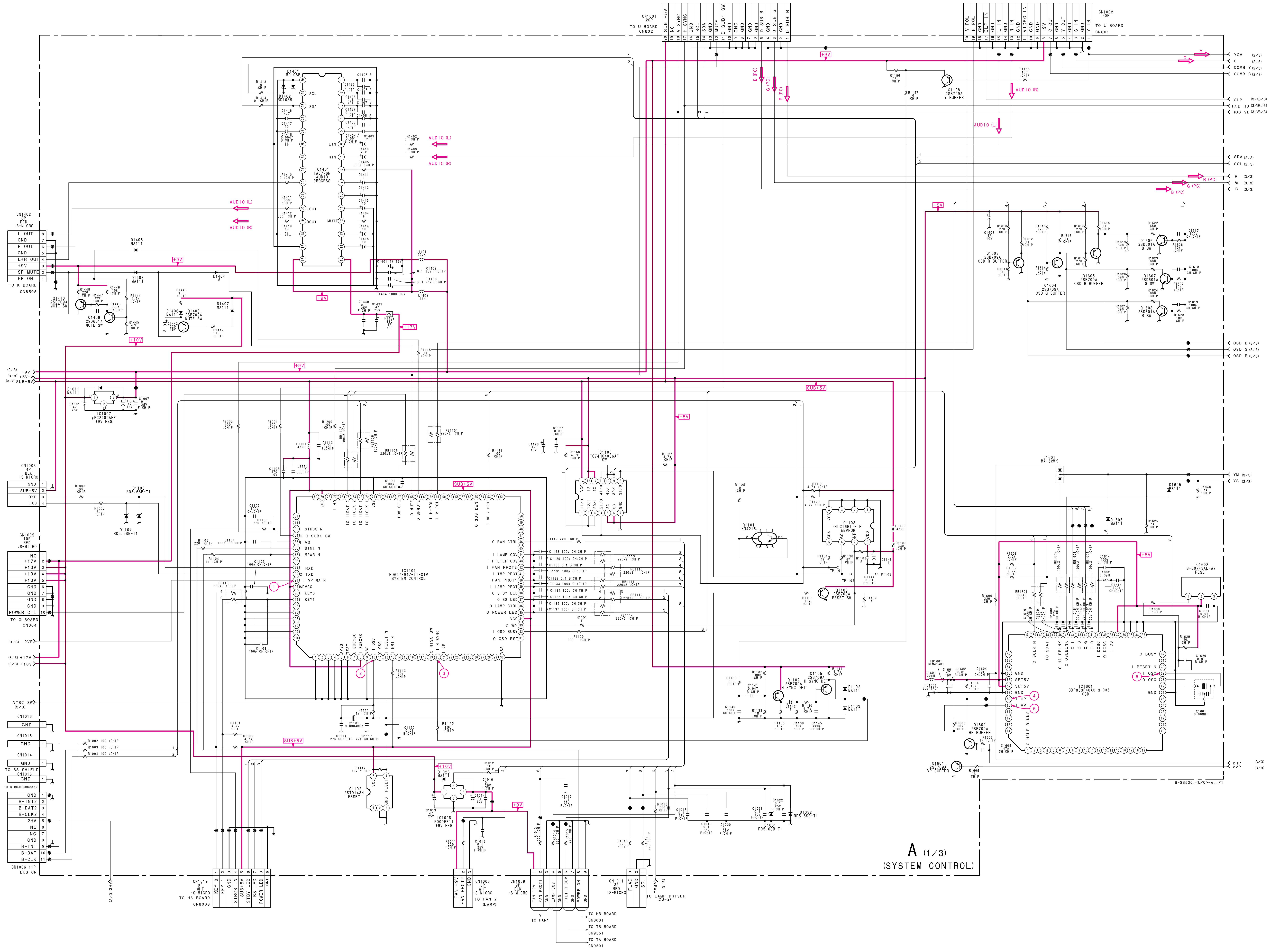
KL-W7000/W9000
RM-Y980

KL-W7000/W9000
RM-Y980

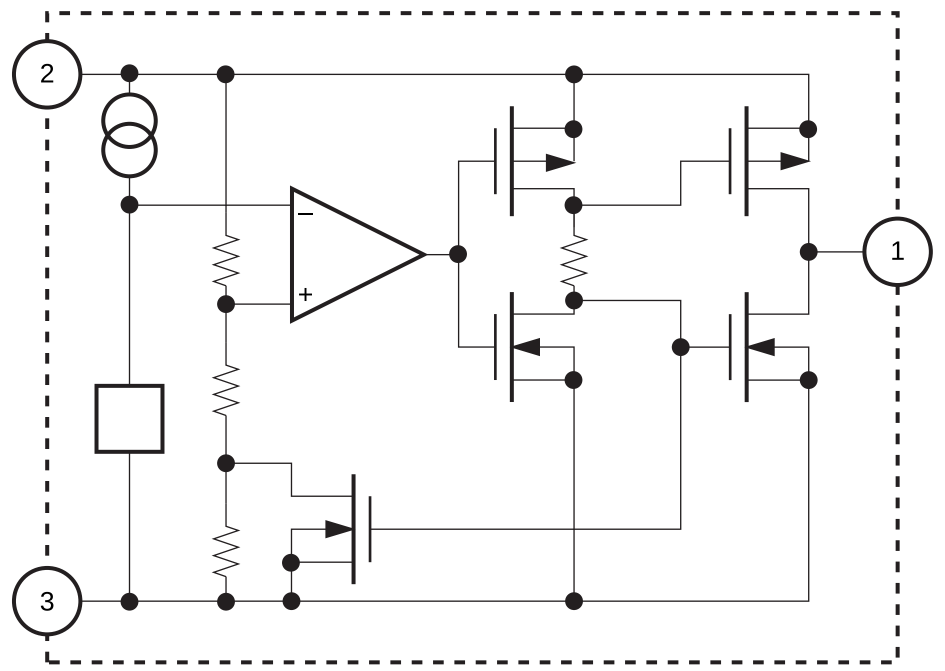
— A BOARD (Component Side) —



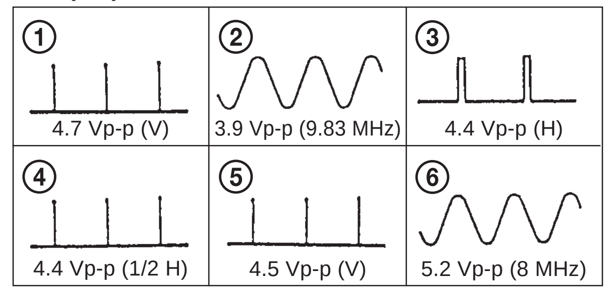
(2) Schematic Diagram of A (1/3) Board



• A(1/3) BOARD
IC1602 S-80743AL-A7

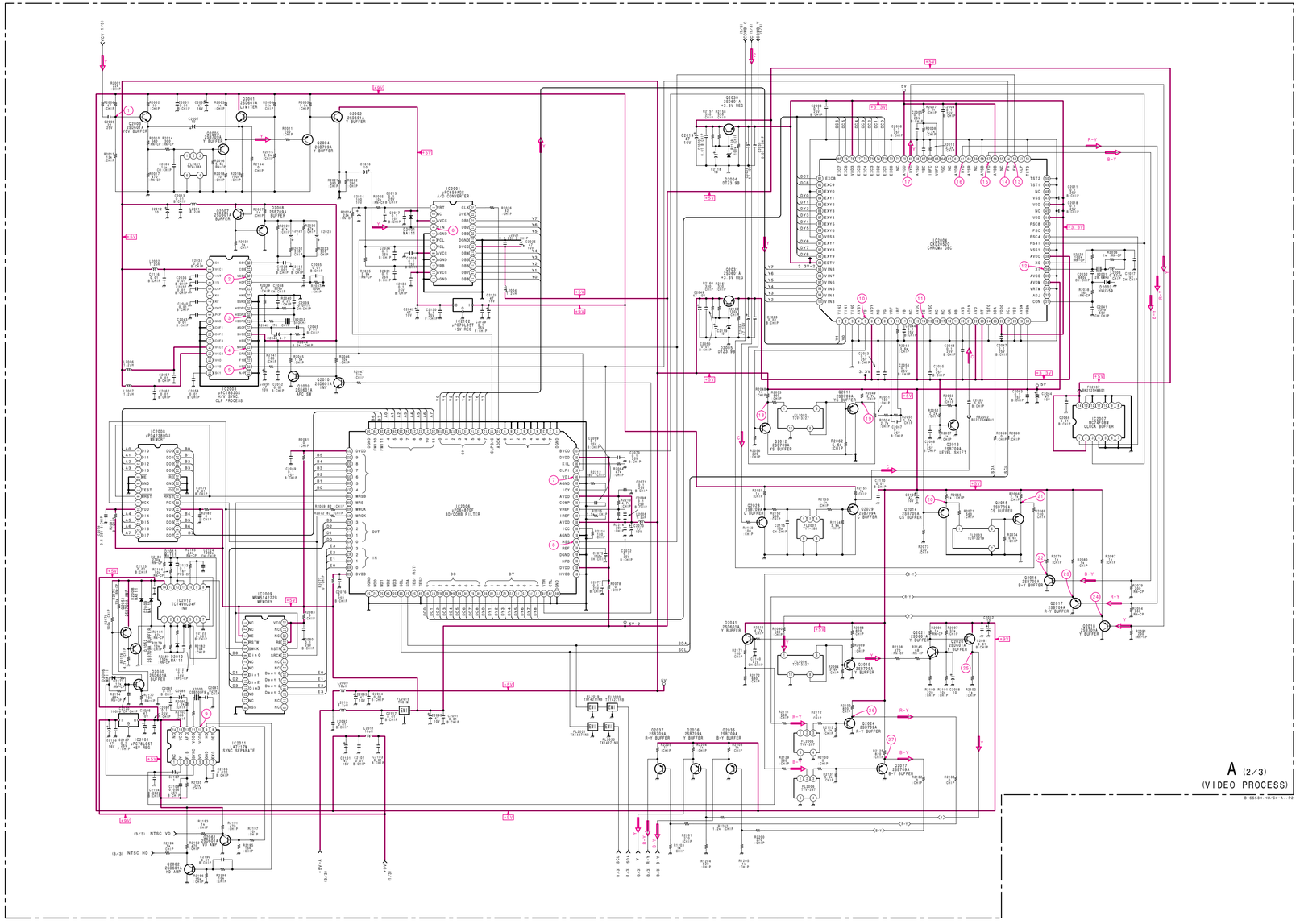


• A (1/3) BOARD WAVEFORMS



• A (1/3) BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]
IC1008	4	5.0
IC1101	10	2.3
	11	2.4
	12	5.0
	13	*
	19	4.9
	20	0
	32	0
	33	0
	35	0.2
	36	4.7
	37	0.2
	38	5.0
	39	0.2
	40	0.1
	41	0.1
	42	0
	43	0
	44	0
	46	50
	53	0
	55	0
	61	0
	62	0
	64	0
	65	0
	67	4.6
	72	4.8
	73	4.8
	74	5.1
	75	5.1
	77	4.6
	83	5.0
	84	4.7
	85	4.7
	86	5.0
	87	0
	89	2.5
	90	4.9
	91	0
	93	5.0
	94	5.0
IC1102	4	5.0
IC1103	5	4.8
	6	4.8
	7	0.2
IC1401	1	4.4
	2	4.4
	3	4.4
	4	4.4
	5	4.4
	6	4.4
	7	4.4
	8	1.8
	9	4.4
	10	4.3
	11	4.4
	13	2.9
	14	2.6
	15	12.2
	18	4.4
	19	5.0
	20	4.9
	22	5.1
	25	1.4
	26	6.0
	27	2.1
	28	5.0
	29	5.0
IC1601	1	0
	28	2.6
	29	2.2
	30	5.2
	32	0
	37	5.1
	39	2.7
	40	2.7
	41	0
	42	0
	43	0
	44	0
	45	0
	46	0
	48	5.2
	50	5.2
	59	0.9
	60	0.8
IC1602	1	5.2
	2	5.2
Q1101	B1	5.2
	C1	4.9
	E1	4.8
	B2	5.2
	C2	5.0
	E2	4.8
Q1102	B	5.2
	C	0.9
Q1105	B	0
	E	0.7
Q1408	B	9.2
	C	–0.5
Q1409	B	0
	C	9.0
Q1410	B	9.0
	C	–1.1
Q1601	B	0
	E	0.8
Q1602	B	0.2
	E	0.9
Q1603	B	0
	E	0.7
Q1604	B	0
	E	0.7
Q1605	B	0
	E	0.7
Q1606	B	0
	C	0.7
Q1607	B	0
	C	0.7
Q1608	B	0
	C	0.7

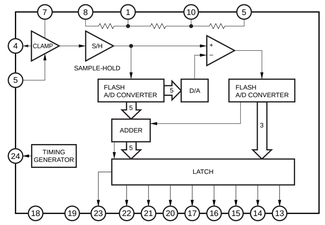


Schematic diagram
← A (1/3) board

Schematic diagram
A (1/3) board →

• A(2/3) BOARD

IC2001 µPC659AGS



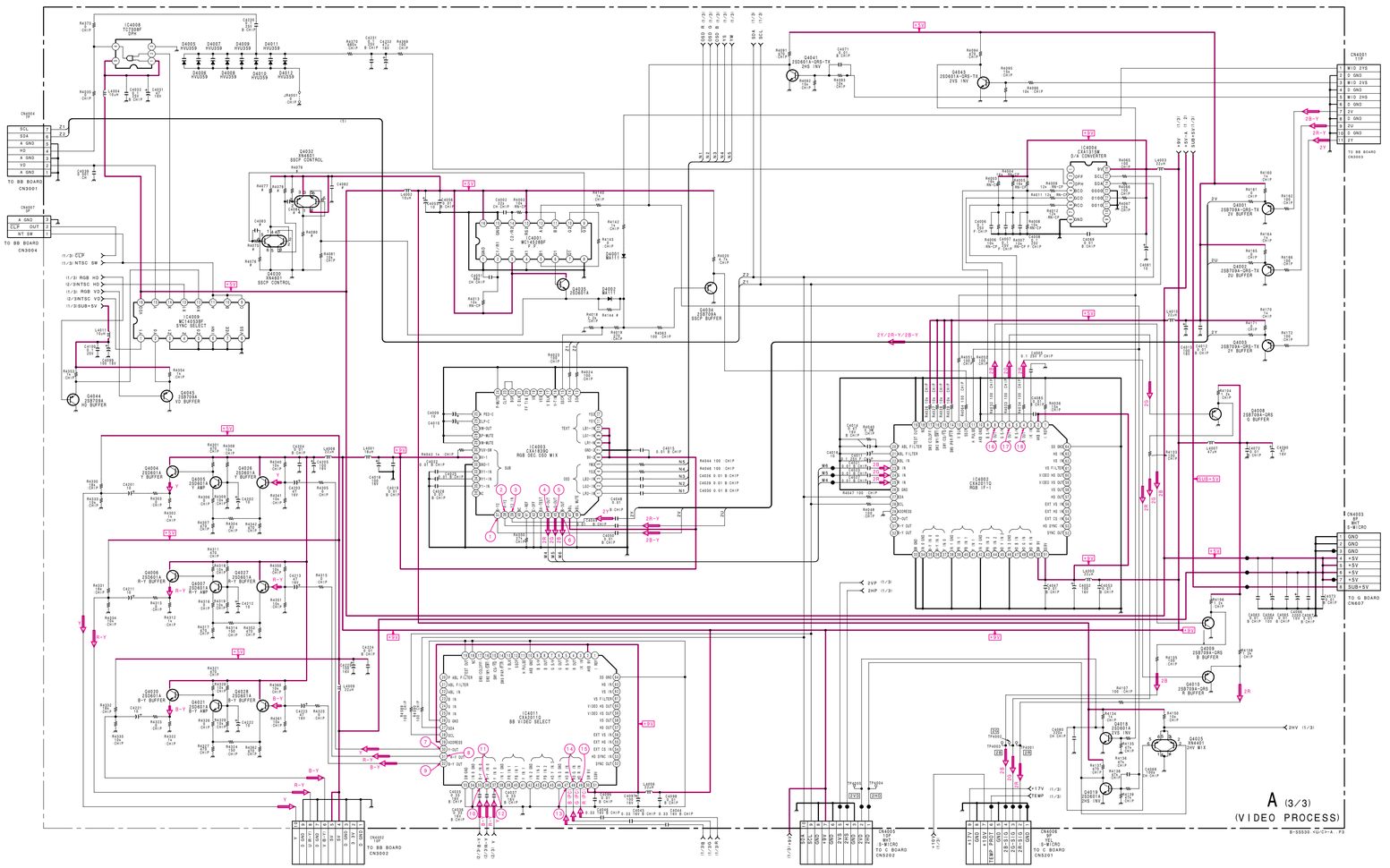
• A (2/3) BOARD WAVEFORMS

① 2.3 Vp-p (H)	② 1.2 Vp-p (H)	③ 0.7 Vp-p (503 kHz)	④ 4.4 Vp-p (H)	⑤ 4.4 Vp-p (V)	⑥ 0.9 Vp-p (H)	⑦ 4.4 Vp-p (V)	
⑧ 4.4 Vp-p (H)	⑨ 0.7 Vp-p (500 kHz)	⑩ 0.9 Vp-p (H)	⑪ 0.8 Vp-p (H)	⑫ 0.8 Vp-p (28.6 MHz)	⑬ 4.5 Vp-p (H)	⑭ 4.5 Vp-p (V)	
⑮ 1.2 Vp-p (H)	⑯ 1.0 Vp-p (H)	⑰ 1.7 Vp-p (H)	⑱ 0.8 Vp-p (H)	⑲ 0.8 Vp-p (H)	⑳ 0.8 Vp-p (H)	㉑ 0.7 Vp-p (H)	
㉒ 1.2 Vp-p (H)	㉓ 1.0 Vp-p (H)	㉔ 1.7 Vp-p (H)	㉕ 1.5 Vp-p (H)	㉖ 0.8 Vp-p (H)	㉗ 0.8 Vp-p (H)		

• A (2/3) BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]		Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]
IC2001	1	3.5		96	1.8		3	2.7	Q2011	B	1.1
	4	2.9		97	2.3		4	2.7		E	1.8
	6	0.4		98	3.0		8	5.4	Q2012	B	0.5
	7	2.8		99	2.5		9	1.3		E	1.2
	10	2.5		100	2.3		11	3.5			
	13	2.0					12	2.8	Q2013	B	1.2
	14	2.1	IC2006	10	2.3		13	2.1		E	1.9
	15	2.3		11	2.6		14	1.8			
	16	2.5		12	1.6		15	1.5	Q2014	B	0.6
	17	3.0		13	1.8		16	1.6		E	1.3
	20	2.3		14	2.3		17	2.7			
	21	1.8		15	3.0		18	3.3	Q2015	B	1.2
	22	1.6		16	2.5		20	1.3		E	1.9
	24	2.3		17	2.3		21	5.4			
				18	2.1		25	2.5	Q2016	B	1.2
IC2003	3	2.8		19	2.0		26	2.4		E	1.8
	4	3.4		20	1.8		27	2.3			
	5	0		21	2.1		28	2.8	Q2017	B	1.2
	7	3.7		22	2.8					E	1.8
	9	2.8		23	3.5	IC2009	3	5.4			
	18	3.9		24	2.7		4	0	Q2018	B	0.9
	20	4.5		25	2.7		5	1.3		E	1.6
	22	0.4		26	2.7		6	2.6	Q2019	B	1.4
	23	4.3		27	2.9		9	2.6		E	2.2
	26	3.5		28	1.5		10	2.8			
	27	3.0		29	1.6		11	3.0	Q2020	B	4.4
	28	4.1		32	2.7		17	3.5		E	3.7
	29	4.1		33	3.3		18	3.3			
	33	4.4		34	2.5		19	2.9	Q2021	B	2.2
	34	3.2		35	2.4		20	2.7		C	4.4
	36	3.2		36	2.3		23	1.3		E	1.5
				37	2.8		24	0			
IC2004	1	2.1		38	5.4				Q2024	B	1.7
	2	2.0		39	0	IC2011	2	2.6		E	2.4
	5	0.5		40	1.3		3	3.5			
	8	1.7		41	1.3		4	4.2	Q2027	B	1.7
	9	1.2		42	3.0		5	5.2		E	2.4
	10	1.2		43	2.8		7	4.4			
	11	0.6		44	2.6		9	4.4	Q2028	B	2.8
	14	0.6		45	2.6		10	4.3		E	3.5
	19	1.9		46	3.5		11	4.5			
	21	2.7		47	3.3		12	2.4	Q2029	B	2.3
	25	5.4		48	2.9	IC2012	1	1.9		E	3.0
	27	5.4		49	2.7		2	4.0			
	31	2.5		56	5.4		3	4.0	Q2030	B	4.3
	36	1.9		57	5.4		4	4.1		C	5.4
	37	2.1		60	2.6		5	4.2		E	3.6
	40	2.0		61	2.5		6	0.2	Q2031	B	4.3
	41	1.7		62	2.5		8	4.8		C	5.4
	56	5.4		63	2.5		9	0.3		E	3.6
	57	1.2		64	2.5		10	0.3			
	61	1.1		65	2.5		11	4.8	Q2035	B	1.7
	64	3.0		66	2.5		12	4.8		E	2.3
	65	2.2		67	2.5		13	0.3			
	66	2.2		68	2.8				Q2036	B	1.2
	67	0.6		69	2.6	Q2002	B	2.6		E	1.9
	69	0.9		70	2.6		E	1.9			
	73	2.7		71	2.6	Q2003	B	3.3	Q2037	B	1.6
	74	2.6		72	3.0		E	2.6		E	2.3
	75	2.5		73	2.4						
	76	2.5		74	3.0	Q2004	B	1.9	Q2041	B	2.1
	77	2.6		75	2.7		E	2.6		E	1.5
	78	3.6		76	2.4						
	79	2.6		77	1.8	Q2005	B	1.2	Q2050	B	3.2
	80	2.6		78	0		E	1.9		C	4.4
	81	2.5		86	4.3					E	2.7
	82	2.9		96	4.5	Q2007	B	2.3			
	84	2.7		79	0.4		E	1.6	Q2051	B	4.4
	85	2.7		98	0	Q2008	B	1.6		C	5.0
	86	2.6		99	5.4		E	2.3			
	87	3.0		100	2.0				Q2052	B	5.0
	88	2.4	IC2007	1	1.7	Q2009	B	0.8		E	1.9
	89	3.0		3	2.0		C	0			
	91	2.7							Q2061	B	0.7
	92	2.3	IC2008	1	2.9	Q2010	B	0		C	0.4
	93	1.8		2	2.7		C	0.8			
	95	1.6							Q2062	B	0.5
										C	0.4

(4) Schematic Diagram of A (3/3) Board

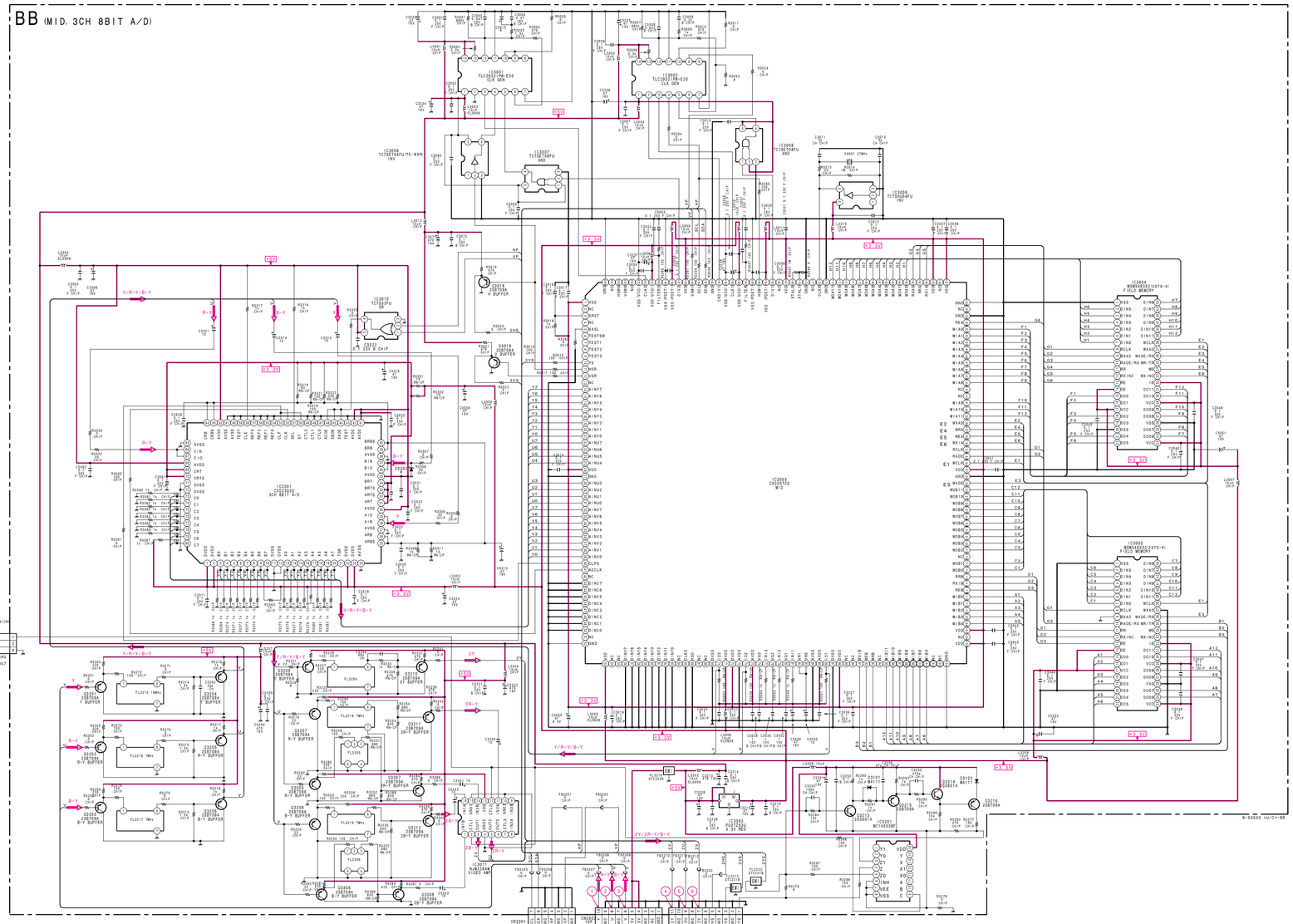


• **A (3/3) BOARD WAVEFORMS**

① 0.5 Vp-p (H)	② 0.5 Vp-p (H)	③ 0.5 Vp-p (H)	④ 1.5 Vp-p (H)	⑤ 1.5 Vp-p (H)	⑥ 1.5 Vp-p (H)
⑦ 0.5 Vp-p (H)	⑧ 0.5 Vp-p (H)	⑨ 0.5 Vp-p (H)	⑩ 0.8 Vp-p (H)	⑪ 0.8 Vp-p (H)	⑫ 1.5 Vp-p (H)
⑬ 0.7 Vp-p (H)	⑭ 0.7 Vp-p (H)	⑮ 0.7 Vp-p (H)	⑯ 4.5 Vp-p (H)	⑰ 4.5 Vp-p (H)	⑱ 4.5 Vp-p (H)

• **A (3/3) BOARD VOLTAGE LIST**

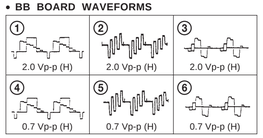
Ref.	Pin No.	Voltage [V]
IC4001	2	4.9
	9	5.5
	12	1.1
	14	5.4
IC4002	1	2.9
	3	3.4
	4	2.1
	5	3.5
	6	2.3
	7	3.8
	8	2.5
	9	4.0
	11	1.0
	12	1.3
	13	0.5
	14	5.6
	15	5.6
	16	5.6
	17	5.6
	20	0
	21	9.4
	22	2.5
	23	3.6
	24	3.6
	25	3.6
	27	5.3
	28	5.4
IC4003	1	6.6
	2	6.6
	3	6.6
	4	0.2
	5	0
	6	9.6
	13	5.4
	14	5.4
	15	0.6
	22	0.5
	25	4.5
	26	4.7
	30	9.1
	33	4.8
	34	4.9
	35	4.8
	37	4.8
	38	4.8
	39	4.8
	41	2.7
	44	3.0
	45	2.9
	46	3.0
	47	9.4
IC4004	4	5.3
	5	4.8
	6	3.5
	14	5.4
	15	5.4
IC4009	1	0.4
	2	0.3
	9	0
	10	0
	11	0
	12	0.8
	13	0.4
	14	0.8
	15	0.3
IC4011	27	5.0
	28	5.0
	30	6.7
	31	6.6
	32	6.1
	35	4.3
	36	4.3
	37	4.3
	47	4.4
	48	4.4
	49	4.4
Q4002	B	1.8
	E	2.4
Q4003	B	1.8
	E	2.4
Q4004	B	6.8
	E	0
Q4005	B	3.3
	C	6.9
	E	2.6
Q4006	B	6.4
	E	5.8
Q4007	B	3.2
	C	6.4
	E	2.6
Q4008	B	2.3
	E	3.0
Q4009	B	2.5
	E	3.2
Q4010	B	2.2
	E	2.8
Q4018	B	0.5
	C	5.4
Q4019	B	0.4
	C	5.1
Q4020	B	6.4
	E	5.8
Q4021	B	3.3
	C	6.4
	E	2.6
Q4025	B1	5.1
	E1	5.1
	B2	5.1
	E2	5.4
Q4026	B	3.4
	E	2.7
Q4027	B	3.2
	E	2.6
Q4028	B	3.3
	E	2.6
Q4030	B1	1.1
	C1	0.5
	E1	0.5
	B2	0
	C2	0.5
	E2	0
Q4032	B1	5.6
	C1	5.6
	E1	5.6
	B2	0.3
	C2	0.4
	E2	0.4
Q4034	B	0.7
	E	1.3



Schematic diagram
← A (3/3) board

Schematic diagram
BB board →

• BB BOARD WAVEFORMS

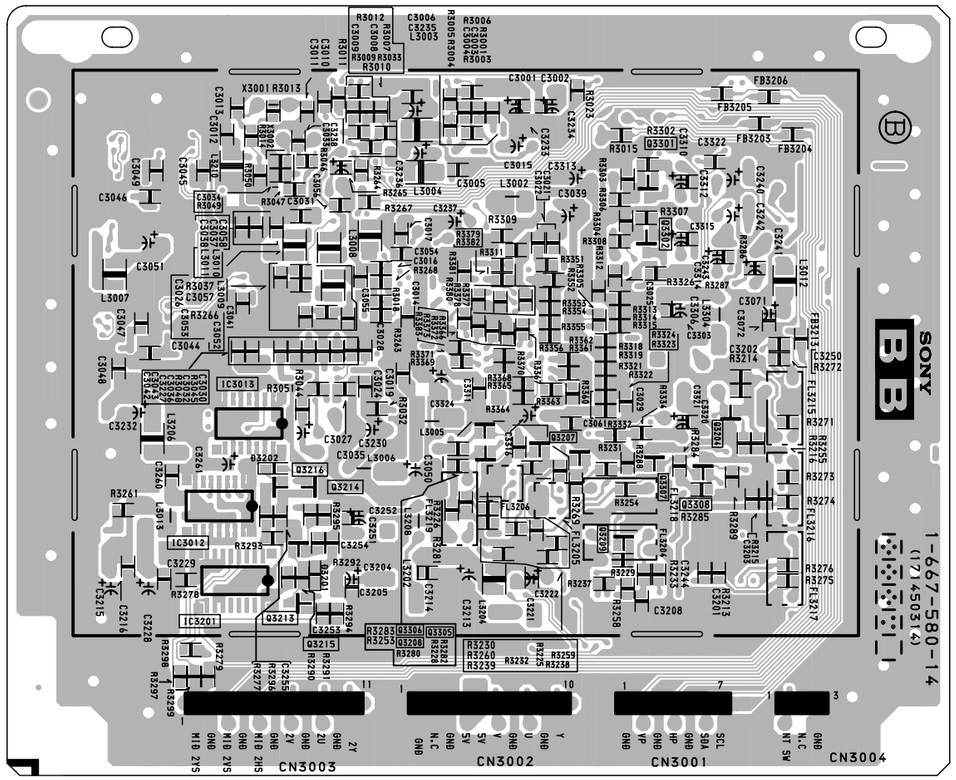


• BB BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]
IC3001	3	2.5
	4	0.4
	5	1.6
	6	1.8
	7	0
	12	1.8
	13	3.0
IC3002	2	0
	3	2.4
	4	0.6
	5	2.5
	6	1.8
	7	0
	9	0
	11	0
	12	1.8
	13	3.1
IC3004	2	1.5
	3	1.3
	4	0.7
	5	0.6
	6	1.0
	7	1.7
	8	0
	9	0
	10	0
	11	0
	12	0
	13	2.0
	15	1.8
	16	1.0
	18	0.6
	19	0.7
	21	1.2
	22	1.4
	24	1.1
	25	1.0
	27	0.6
	28	0.9
	30	1.5
	31	1.8
	32	3.4
	33	0
	34	2.0
	35	0
	36	0
	37	0
	38	1.8
	39	2.1
	40	1.6
	41	1.2
	42	0.7
	43	1.0
	44	1.0
IC3005	2	1.0
	3	1.9
	4	1.9
	5	1.6
	6	1.0
	7	0.7
	8	1.8
	10	0
	11	0
	12	0
	13	2.0
	15	0.6
	16	1.1
	18	1.9
	19	2.0
	21	1.6
	22	1.0
	24	0.5
	25	0.7
	27	1.2
	28	1.4
	30	0.9
	31	0.9
	32	3.4
	33	0
	34	2.0
	35	0
	36	0
	38	1.8
	39	1.0
	40	1.2
	41	1.5
	42	1.3
	43	0.7
	44	0.6
IC3006	2	0.2
	4	0.4
IC3007	1	5.0
	2	1.1
	4	1.6
IC3008	1	1.8
	2	5.0
	4	2.5
IC3009	2	1.7
	4	1.2
IC3011	1	2.5
	2	0
	3	1.7
	5	1.8
	11	2.5
	12	0
	14	2.5
	16	2.5
IC3301	3	1.7
	4	1.8
	5	2.0
	6	1.3
	7	1.5
	8	2.0
	9	1.7
	10	1.8
	13	1.4
	14	0.8
	15	1.6
	16	1.5
	17	1.4
	18	1.6
	19	1.0
	20	0.6
	25	0.7
	26	0.7
	28	1.2
	29	1.2
	31	2.7
	32	2.7
	33	2.7
	34	2.7
	36	1.7
	37	1.7
	39	0.7
	40	0.7
	44	0
	45	0
	46	0
	50	3.5
	51	4.9
	52	1.8
	53	3.5
	58	4.9
	63	0.7
	64	0.7
	66	1.7
	67	1.7
	69	2.7
	70	2.7
	73	1.0
	74	1.7
	75	0.9
	76	1.6
	77	1.4
	78	1.6
	79	1.2
	80	2.1
Q3018	B	3.3
	E	2.7
Q3201	B	2.0
	E	2.7
Q3202	B	2.0
	E	2.7
Q3203	B	2.0
	E	2.7
Q3204	B	2.4
	E	3.1
Q3205	B	2.5
	E	3.1
Q3206	B	2.2
	E	3.1
Q3207	B	2.5
	E	3.1
Q3028	B	2.5
	E	3.1
Q3209	B	2.0
	E	2.7
Q3210	B	1.1
	E	1.8
Q3211	B	1.3
	E	1.9
Q3212	B	1.3
	E	1.9
Q3305	B	2.4
	E	3.1
Q3306	B	2.4
	E	3.1
Q3307	B	1.3
	E	1.9
Q3308	B	1.3
	E	1.9

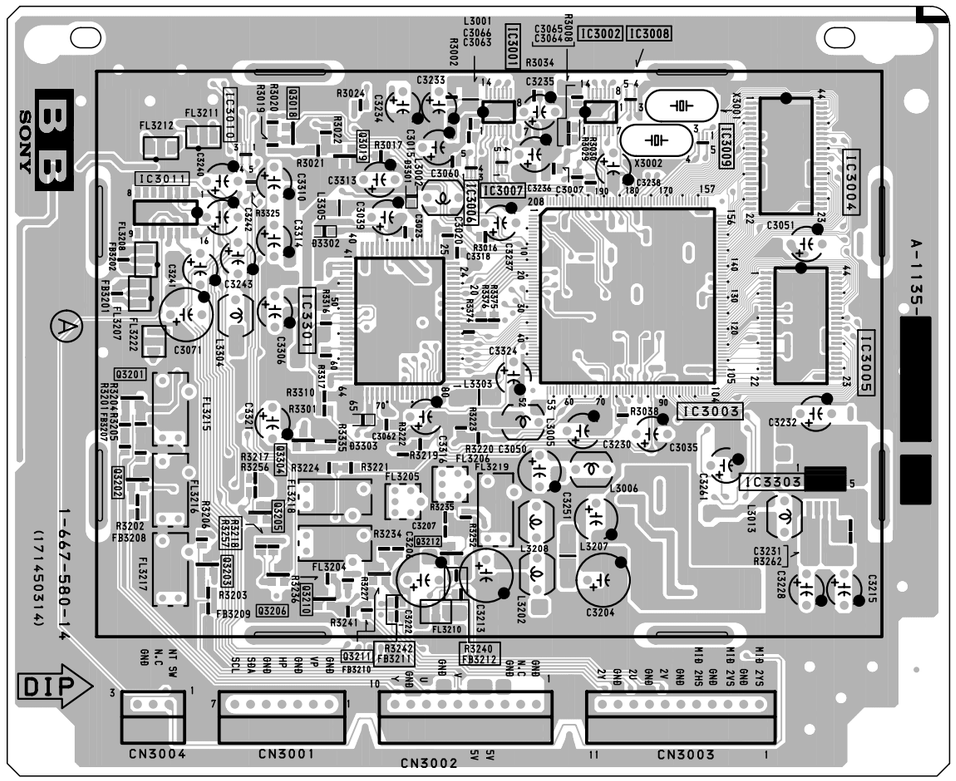
BB ［MID, 3CH 8BIT A/D］

— BB BOARD (Conductor Side) —



KL-W7000/W9000
RM-Y980

— BB BOARD (Component Side) —



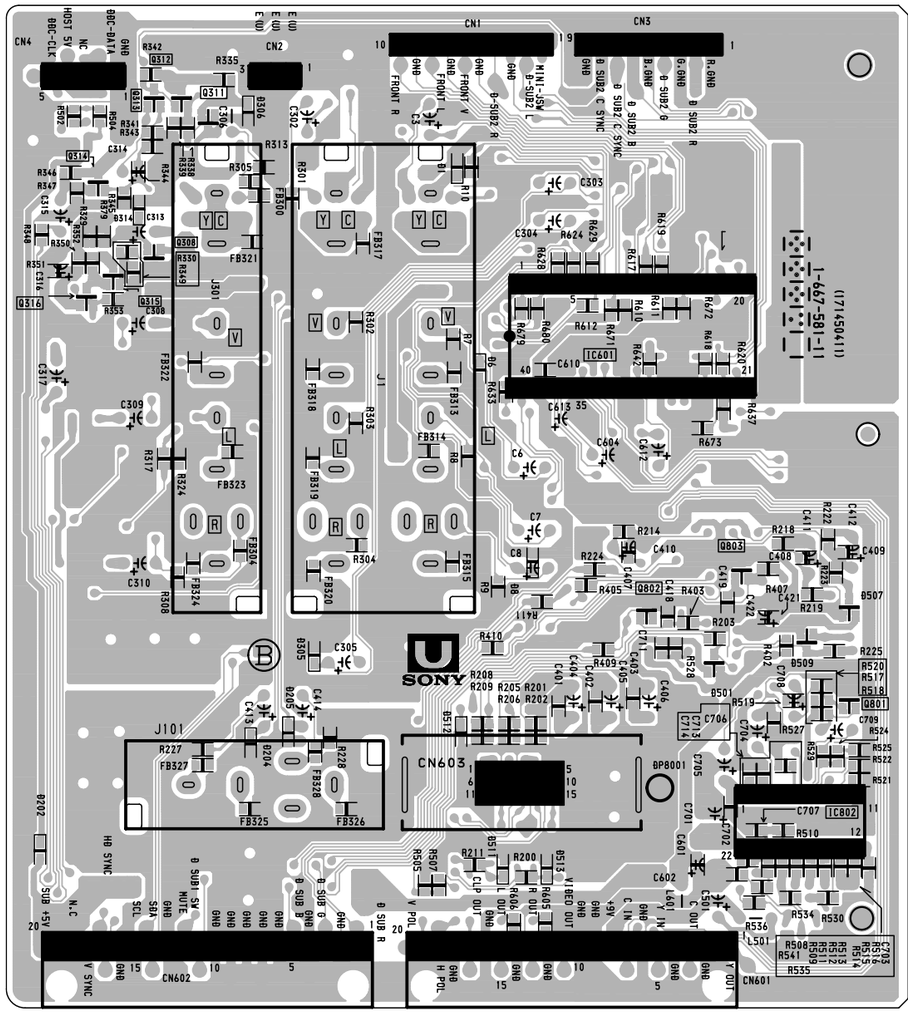
BB BOARD
Terminal name of semiconductors in silk screen printed circuit (∗)

Ref.	∗
Q3204, Q3207–Q3209, Q3305–D3308	①
Q3018, Q3019, Q3201–Q3203, Q3205, Q3206, Q3210–Q3212	②

∗: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 54)

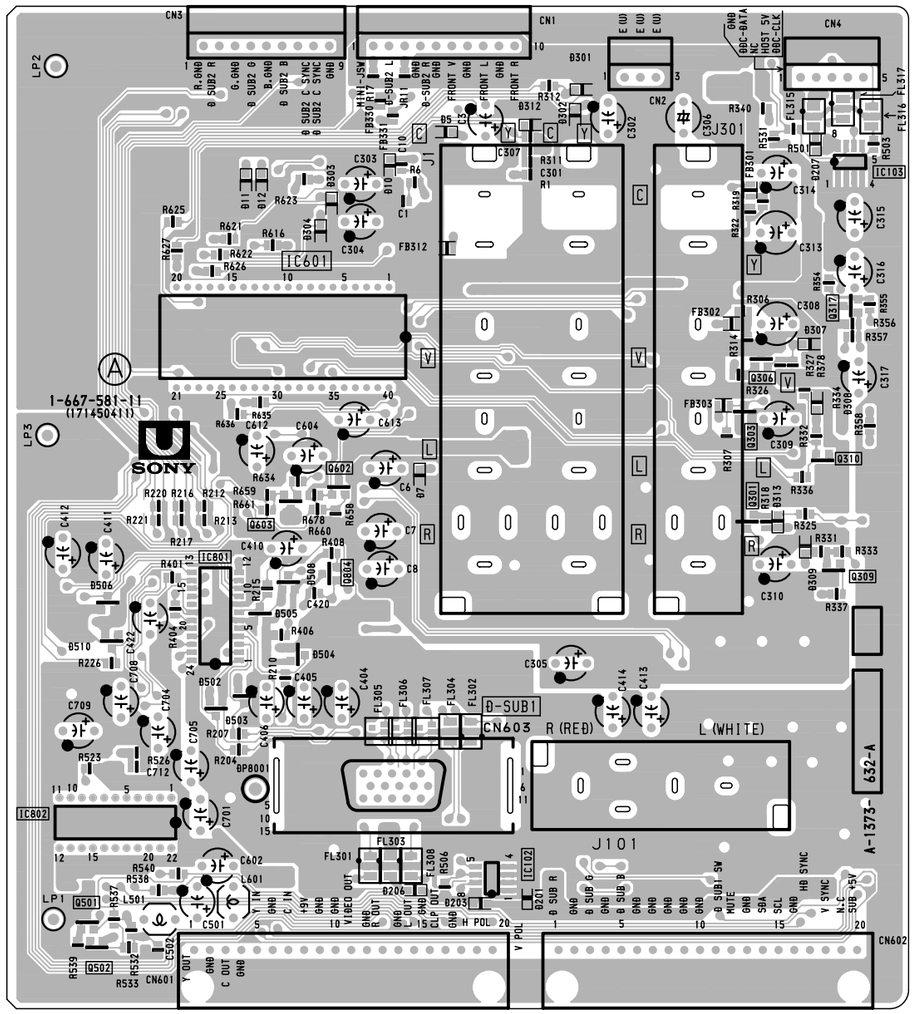
U [IN/OUT TERMINAL, AV SW/INPUT SELECT]

— U BOARD (Conductor Side) —



KL-W7000/W9000
RM-Y980

— U BOARD (Component Side) —

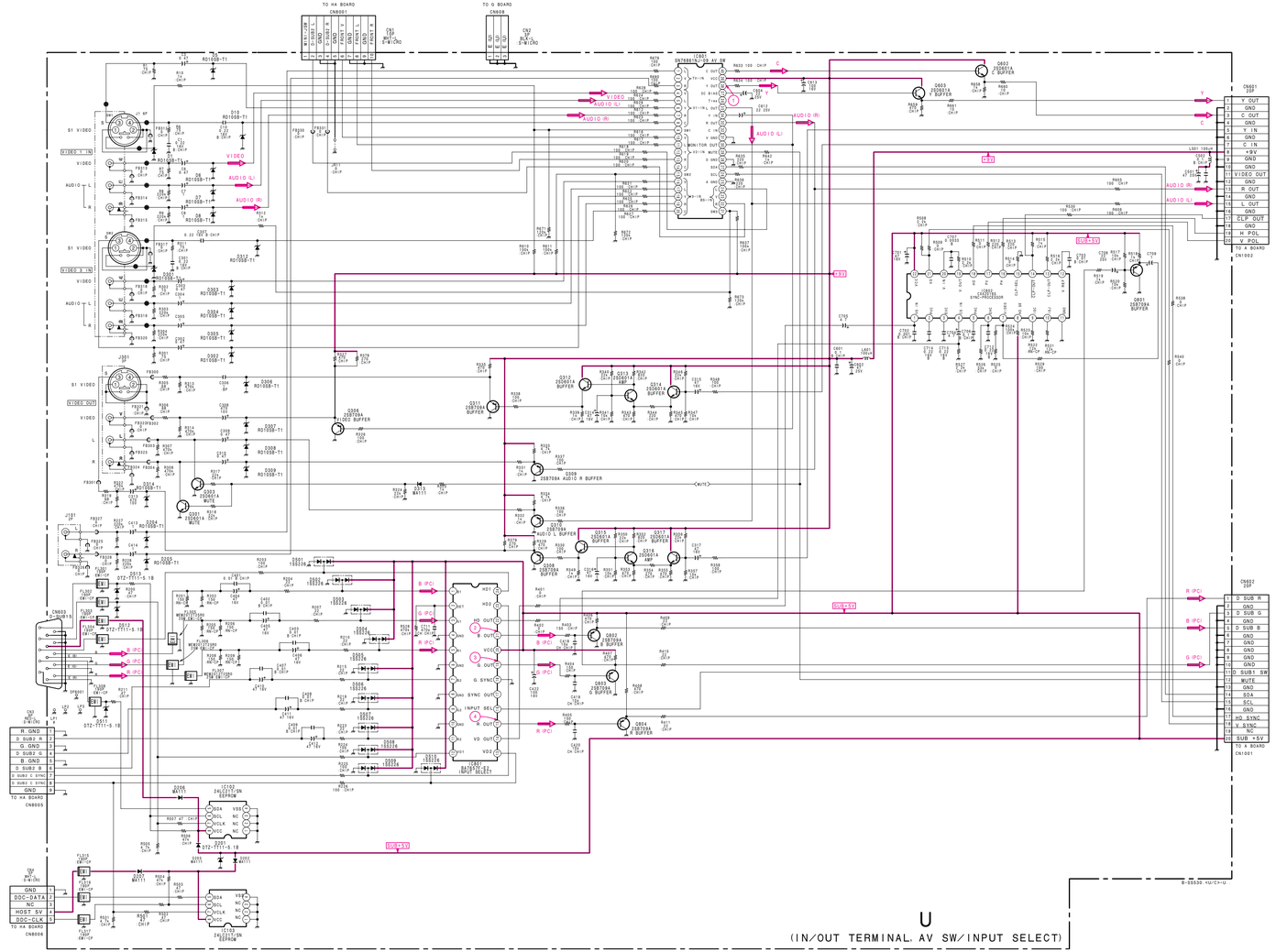


U BOARD
Terminal name of semiconductors in silk screen printed circuit (✻)

Ref.	✻
Q308, Q311–Q316, Q801–Q803	①
Q301, Q303, Q306, Q309, Q310, Q317, Q602, Q603, Q804	②
D1, D5–D8, D10, D201–D207, D301–D309, D312–D314, D511–D513	③
D501, D507, D509	⑥
D502–D506, D508, D510	⑦

✻: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 54)

(6) Schematic Diagram of U Board



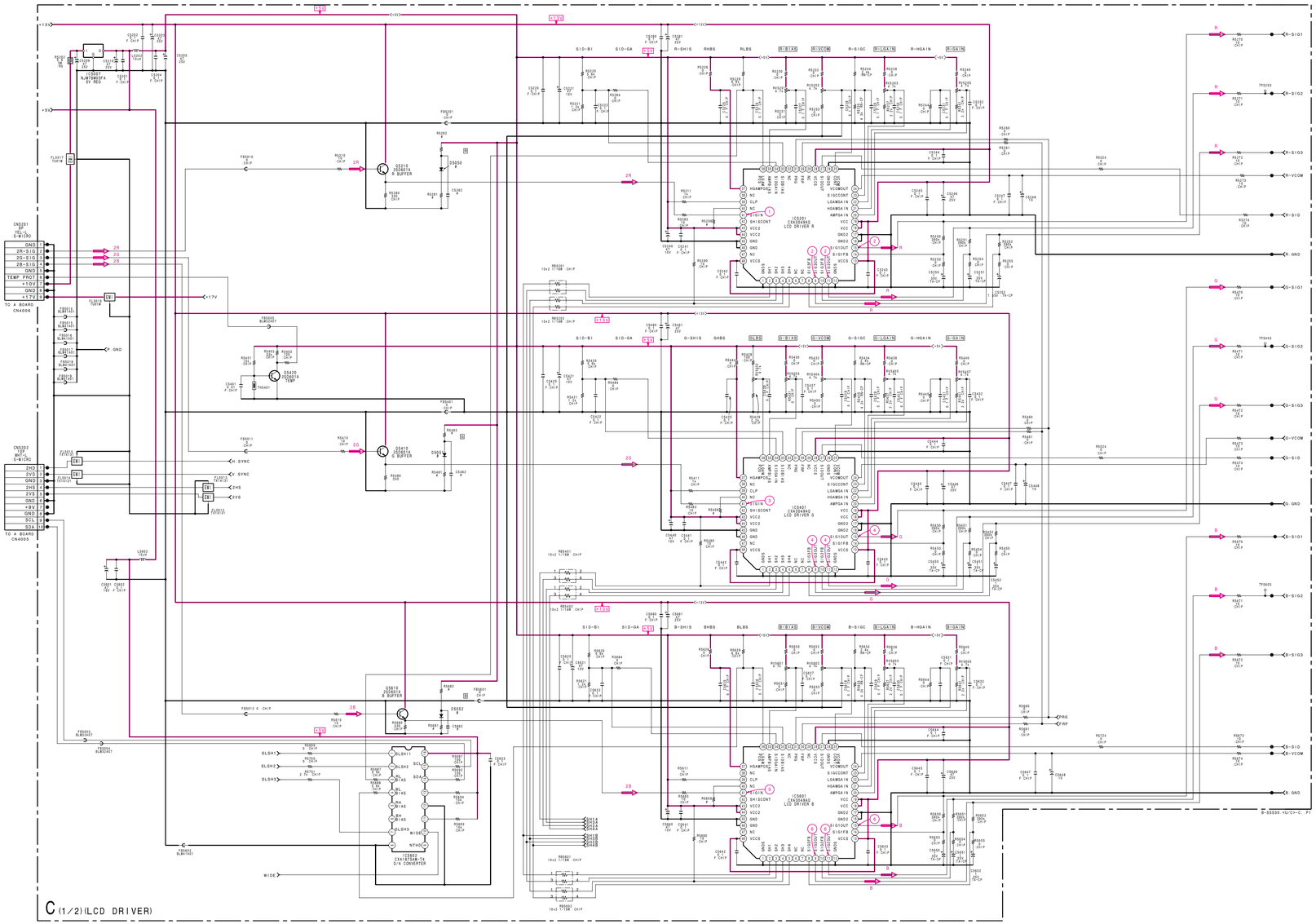
• **U BOARD WAVEFORMS**

①	②	③	④
2.3 Vp-p (H)	0.7 Vp-p (H)	0.9 Vp-p (H)	0.7 Vp-p (H)

• **U BOARD VOLTAGE LIST**

Ref.	Pin No.	Voltage [V]
IC102	5	0.1
	6	4.1
	7	4.2
IC103	5	0.6
	6	4.5
	7	0
IC601	1	4.4
	3	4.4
	4	2.0
	5	4.4
	6	2.0
	7	4.4
	8	3.3
	9	5.0
	10	2.0
	11	4.4
	13	4.4
	15	5.0
	16	2.0
	17	4.4
	18	2.0
	19	4.4
	20	3.2
	21	4.9
	22	4.4
	24	4.4
	26	5.0
	27	5.0
	29	0
	30	3.1
	33	3.8
	34	1.6
	35	3.8
	37	4.3
	38	3.1
	40	3.3
IC801	1	3.6
	2	3.5
	3	3.6
	5	3.6
	7	0
	9	0
	11	0
	12	4.2
	13	0
	14	3.6
	15	2.1
	16	4.9
	19	2.1
	21	2.1
	22	3.0
	23	0.1
	24	3.7
IC802	1	5.9
	2	0.2
	3	3.6
	4	5.7
	5	0.5
	6	2.6
	7	1.5
	8	5.0
	9	1.3
	10	1.3
	12	3.1
	13	0.4
	14	4.9
	15	0
	16	4.9
	17	4.9
	18	0.8
	19	1.3
	20	1.3
	21	0.2
Q306	B	3.1
	E	3.8
Q308	B	4.7
	E	5.4
Q309	B	3.8
	E	4.4
Q310	B	3.8
	E	4.4
Q311	B	4.6
	E	5.3
Q312	B	5.3
	E	4.6
Q313	B	2.6
	C	5.3
	E	2.0
Q314	B	2.7
	E	2.0
Q315	B	5.4
	E	4.8
Q316	B	2.6
	C	5.4
	E	2.0
Q317	B	2.7
	E	2.0
Q602	B	3.4
	E	2.7
Q603	B	3.1
	E	2.4
Q801	B	2.5
	E	3.2
Q802	B	2.1
	E	2.0
Q803	B	2.1
	E	2.8
Q804	B	2.1
	E	2.8

(7) Schematic Diagram of C (1/2) Board



Schematic diagram
◄ U board

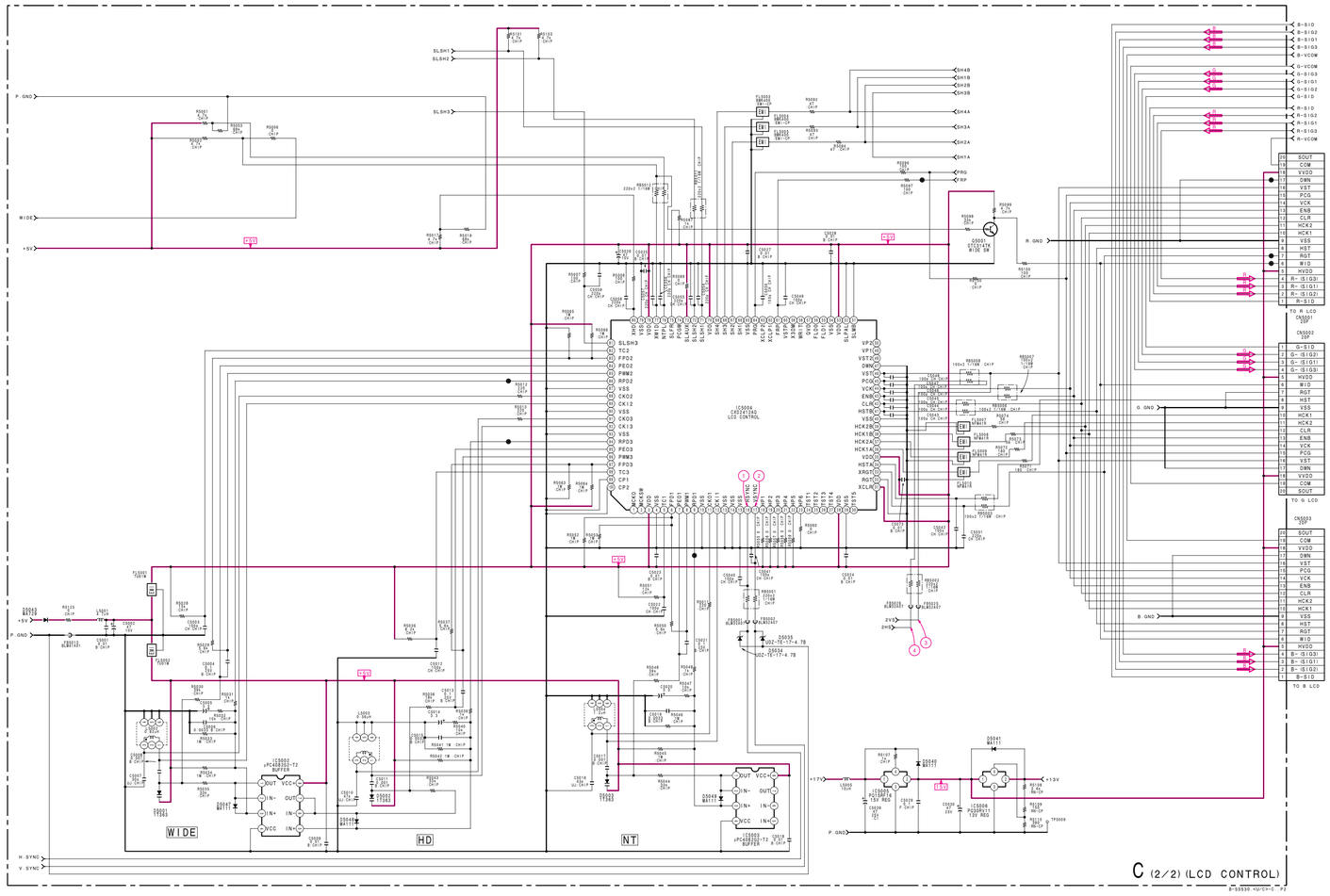
Schematic diagram
C (1/2) board ►

• C (1/2) BOARD WAVEFORMS

① 4.5 Vp-p (H)	② 10.0 Vp-p (H)	③ 4.5 Vp-p (H)
④ 10.0 Vp-p (H)	⑤ 4.5 Vp-p (H)	⑥ 10.0 Vp-p (H)

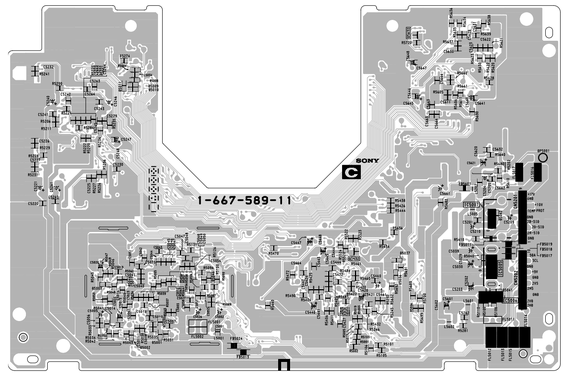
• C (1/2) BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]	Ref.	Pin No.	Voltage [V]
IC5201	2	1.2	IC5401	2	1.2	IC5601	2	1.2	IC5602	1	0
	3	1.2		3	1.2		3	1.2		2	0
	4	5.1		4	5.1		4	5.1		3	2.6
	5	1.2		5	1.2		5	1.2		4	2.9
	8	6.8		8	6.8		8	6.8		7	0.4
	9	6.8		9	6.8		9	6.8		9	4.7
	10	6.8		10	6.8		10	6.8		10	0
	11	6.8		11	6.8		11	6.8		11	5.1
	14	6.8		14	6.8		14	6.8		13	5.1
	15	6.8		15	6.8		15	6.8		14	4.9
	20	3.3		20	3.3		20	3.3		15	5.1
	21	0		21	0		21	0			
	22	2.7		22	2.7		22	2.7	Q5410	B	2.8
	23	3.2		23	3.2		23	3.2		E	2.6
	24	6.3		24	6.3		24	6.3			
	25	1.4		25	1.4		25	1.4	Q5420	B	0.7
	27	6.8		27	6.8		27	6.8		C	0
	30	3.4		30	3.4		30	3.4			
	31	0.3		31	0.3		31	0.3	Q5610	B	2.8
	33	0.9		33	0.9		33	0.9		E	2.6
	34	0.9		34	0.9		34	0.9			
	35	1.3		35	1.3		35	1.3			
	36	3.7		36	3.7		36	3.7			
	37	5.1		37	5.1		37	5.1			
	39	5.1		39	5.1		39	5.1			
	41	2.6		41	2.6		41	2.6			

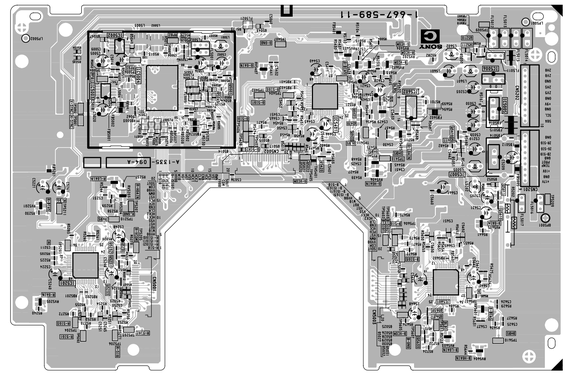


C LCD DRIVER, LCD CONTROL

— C BOARD (Conductor Side) —



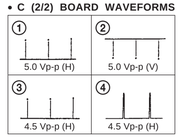
— C BOARD (Component Side) —



• C (2/2) BOARD VOLTAGE LIST

Ref.	Pin No.	Voltage [V]
IC5002	1	2.5
	2	2.5
	3	2.5
	5	0
	6	4.9
	7	4.9
IC5003	1	1.3
	2	1.4
	3	0.8
	5	1.0
	6	0
	7	1.4
IC5004	5	0
	6	0
	7	5.0
	8	0
	9	0
	11	5.0
	12	5.0
	16	5.4
	17	5.4
	20	5.0
	21	5.0
	22	5.0
	31	5.0
	32	0
	33	4.9
	34	0.2
	36	2.2
	37	2.2
	38	1.9
	39	1.9
	41	0.2
	42	0.6
	43	4.4
	44	2.6
	45	0.3
	46	0
	61	2.5
	64	0.4
	66	4.9
	67	1.2
	68	1.2
	69	1.2
	71	5.0
	72	0.2
	73	5.0
	75	5.0
	76	5.2
	77	0.2
	80	5.2
	81	5.3
	82	4.7
	83	2.5
	84	3.3
	85	2.5
	86	2.5
	88	2.5
	89	2.5
	91	4.9
	92	5.0
	94	0
	95	5.0
	96	0
	97	0
	98	0
IC5005	2	16.5
	4	16.2
IC5006	1	16.5
	4	1.4
Q5001	B	0.2
	C	5.1

• C (2/2) BOARD WAVEFORMS



C BOARD
Terminal name of semiconductors in silk screen printed circuit (✻)

Ref.	✻
Q5001, Q5210, Q5410, Q5420, Q5610	②
D5001–D5003, D5034, D5035, D5040, D5041, D5043, D5047–D5049	③

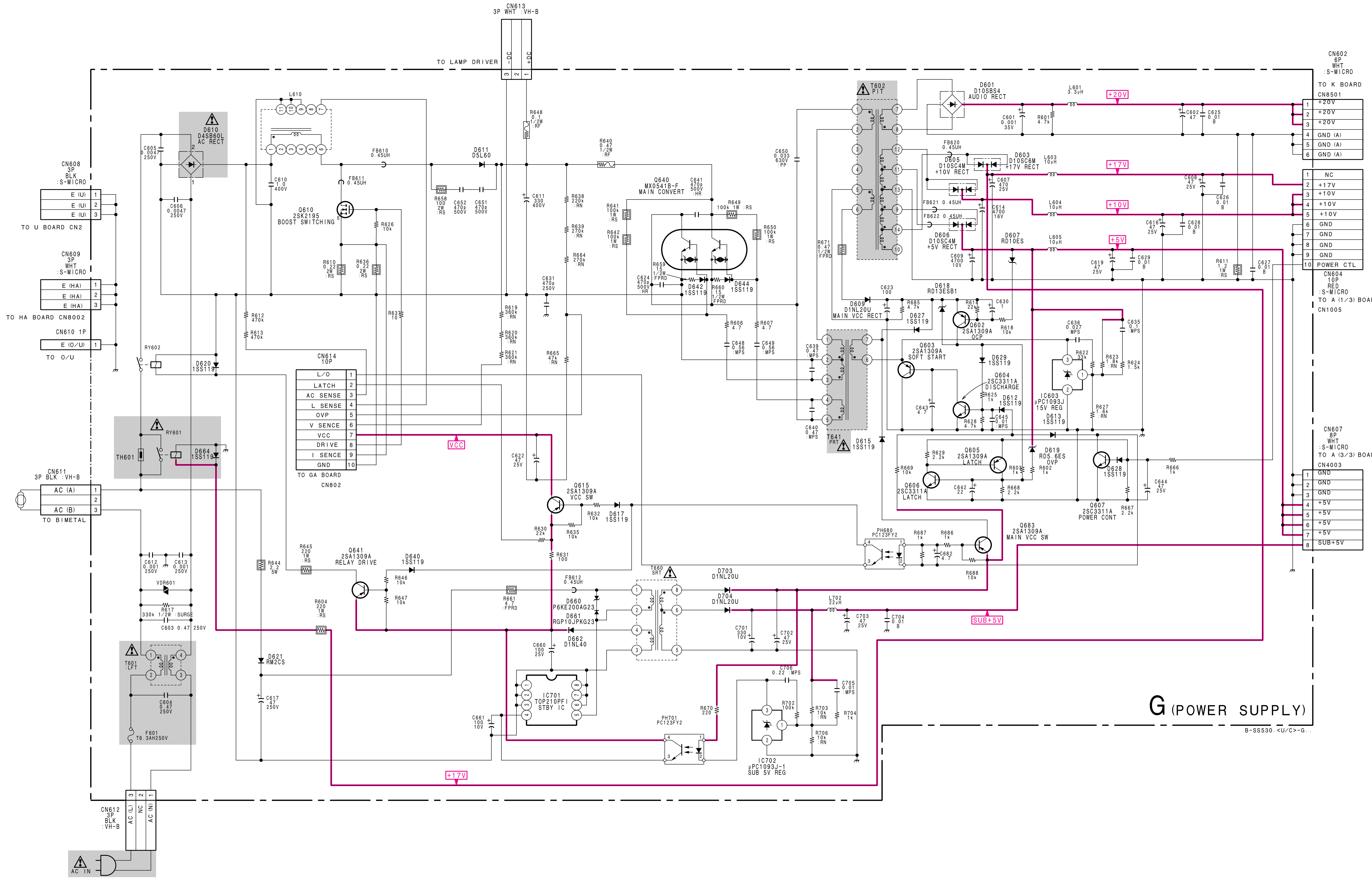
✻: Refer to Terminal name of semiconductors in silk screen printed circuit (see page 54)

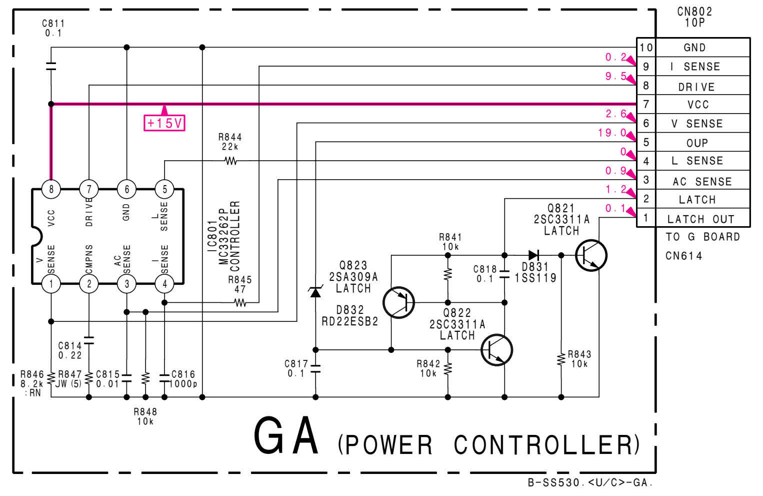
• **G BOARD VOLTAGE LIST**

Ref.	Pin No.	Voltage [V]
IC603	1	2.5
	3	9.3
IC701	4	5.8
	5	123.6
IC702	1	2.5
	3	11.2
PH680	1	1.2
	2	0
	3	0
	4	0.2
PH701	1	12.3
	2	11.2
	3	5.8
	4	16.5
Q602	B	10.0
	C	0.1
	E	10.1
Q603	B	10.2
	E	9.3
Q604	B	0.2
	C	10.2

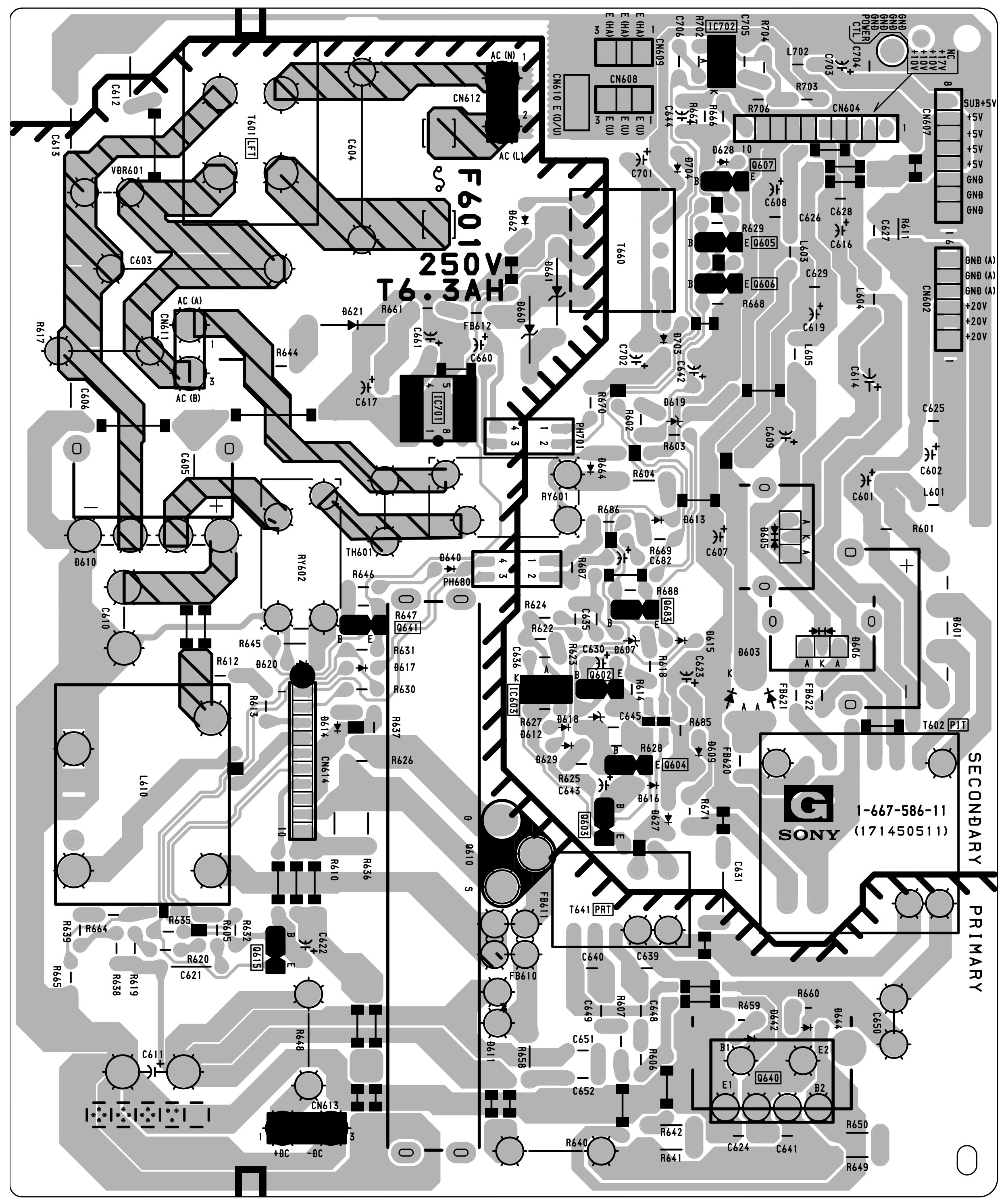
Ref.	Pin No.	Voltage [V]
Q605	B	1.3
	C	0.1
	E	1.4
Q606	B	0.1
	C	1.4
Q607	B	0.7
	C	0
Q615	B	14.1
	E	14.9
Q640	B1	–103.1
	C1	0
	E1	–101.7
	B2	–1.9
	C2	101.1
	E2	0
Q641	B	15.7
	C	16.3
	E	16.5
Q683	B	12.3
	C	13.1
	E	13.2

(9) Schematic Diagram of G and GA Boards

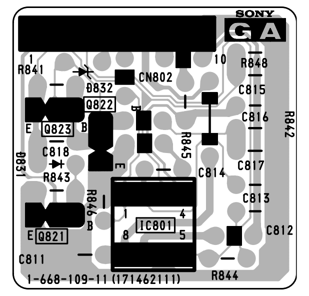




— G BOARD —



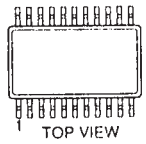
— GA BOARD —



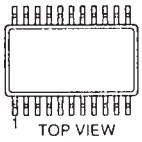
Schematic diagram
← C (2/2) board

Schematic diagrams
G GA boards →

BA7657F-E2
µPC659AGS-E2



CXA1315M
CXA1875AM-T4
HD14053BFP
MC14053BF-T2
MC14528BF
NJM2284M



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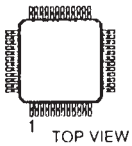
CXA2011Q
CXA3049AQ-T6



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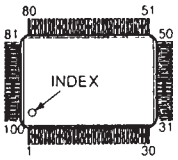

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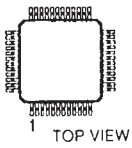

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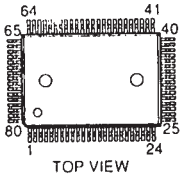

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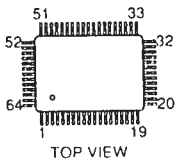

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TC74VHC04F
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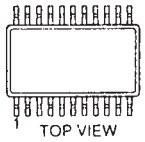

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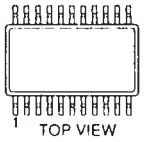
µPD42280GU-30



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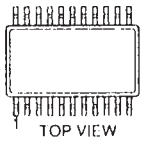

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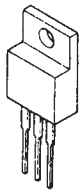

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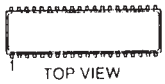

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PQ15RF16
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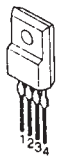

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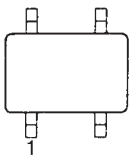
TC7S08F(TE85R)
TC7S32FU(TE85R)



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S-80743AL-A7-T1
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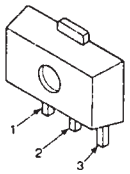

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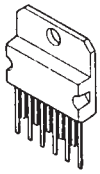

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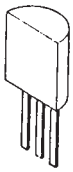

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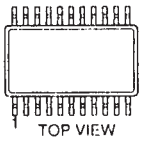

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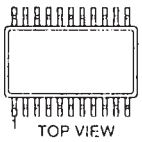
24LC21A/SN
24LC21T/SN



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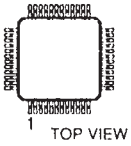

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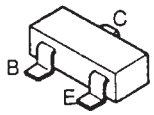
2SD601A-Q
2SD601A-QRS-TX



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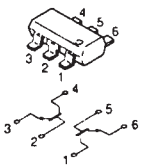

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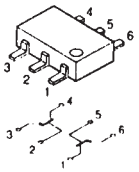

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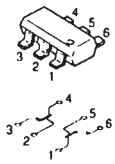

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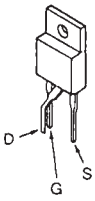

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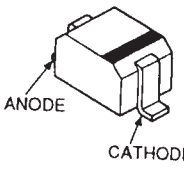
DTZ-TT11-5.1B
DTZ3.9B
DTZ4.7C
DTZ5.1B
HVU359TRF
MA111
MA111-TX
RD10SB-T1
RD10S-B
RD5.6SB-T1
RD5.6S-B
UDZ-TE-17-4.7B
1T363
1T363-04-T8A



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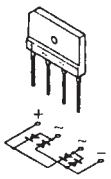
D10SBS4F
D4SB60L



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D10SC6M

D5L60 RM-Y980

MA152WK
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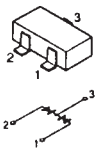

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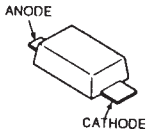

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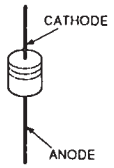
RD22ES-B2
RD30ESB2
RD30ES-B3
RD8.2ESB1
1SS119-25
1SS119-25TD



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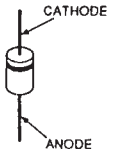
RGP10JPKG23
RM2CS



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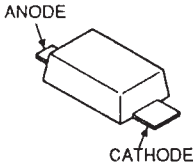

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PC123FY2

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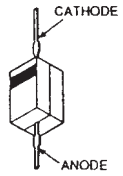

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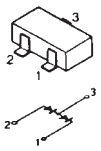

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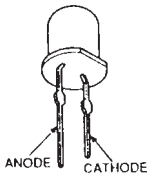
TLR124



SECTION 5
EXPLODED VIEWS

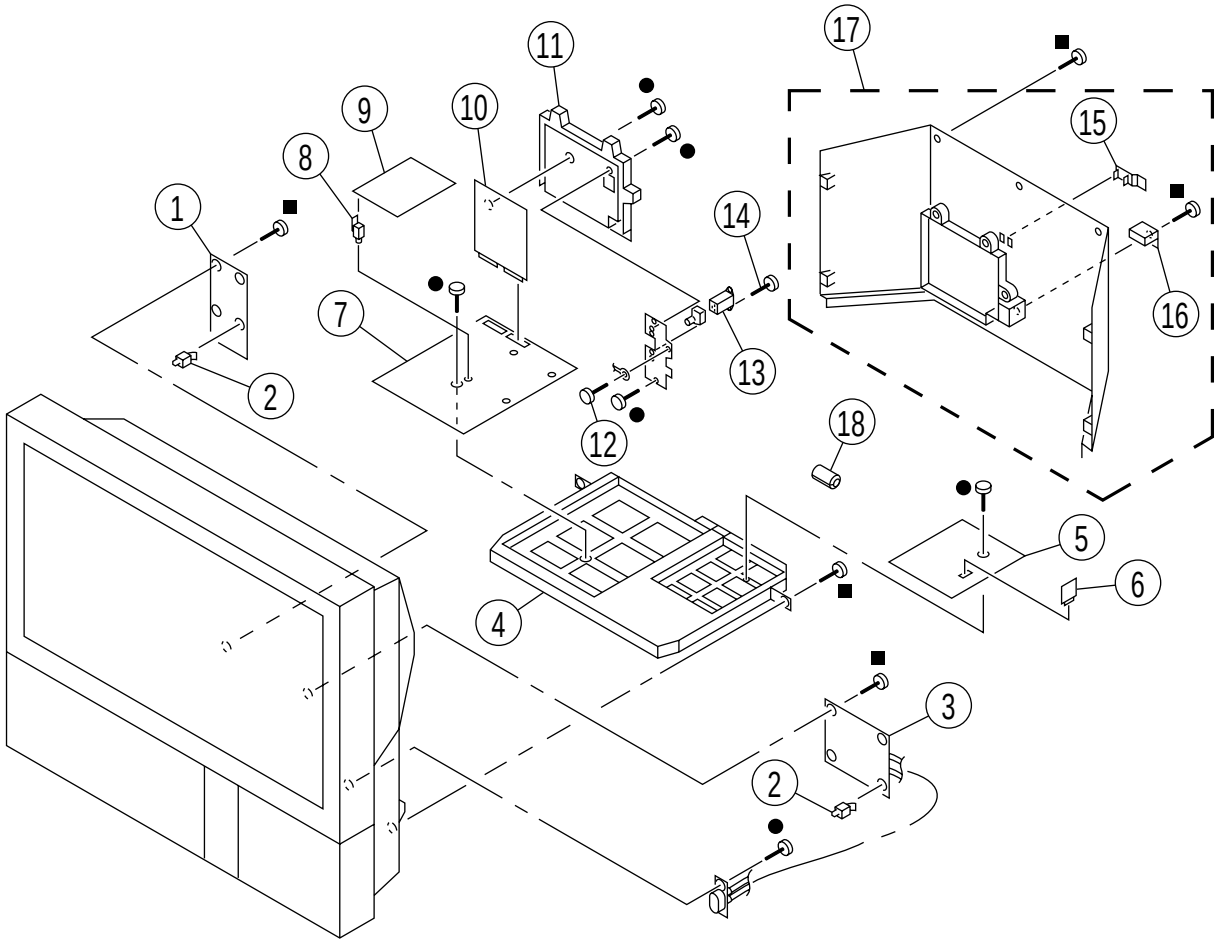
- Items with no part number and no description are not stocked because they are seldom required for routine service.
- The construction parts of an assembled part are indicated with a collation number in the remark column.
- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

5-1. CHASSIS [W7000]

● 7-685-648-79 +BVTP 3X12
■ 7-685-663-79 +BVTP 4X16



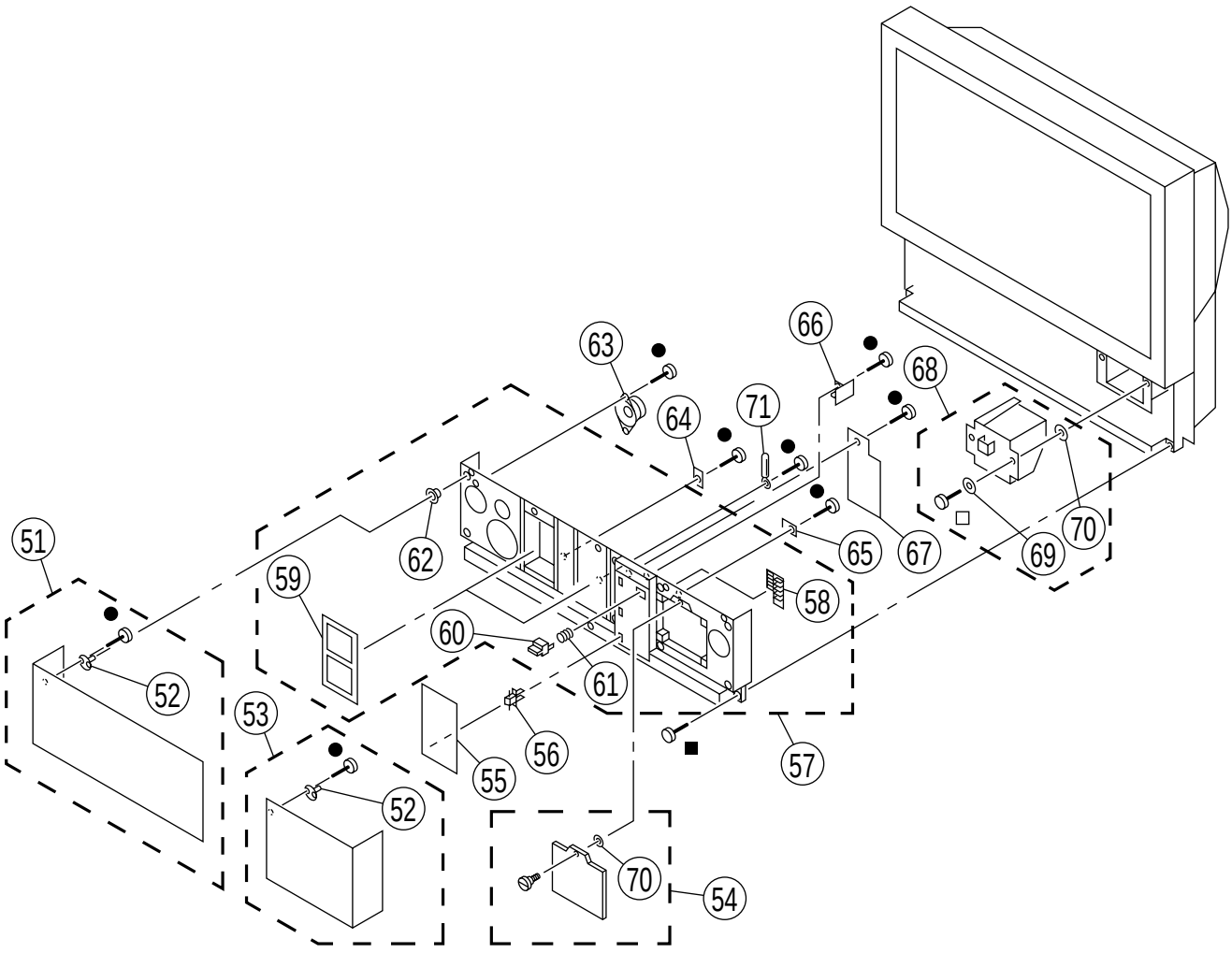
REF.NO.	PART NO.	DESCRIPTION	REMARK
1	* A-1380-551-A	K BOARD, COMPLETE	
2	* 3-703-141-00	HOLDER, PRINTED CIRCURT BOARD	
3	⚠ 1-473-545-13	POWER BLOCK	
4	* 4-051-332-01	BRACKET, MAIN	
5	* A-1311-597-A	G BOARD, COMPLETE	
6	* A-1311-631-A	GA BOARD, COMPLETE	
7	* A-1298-254-A	A BOARD, COMPLETE	
8	* 3-657-516-00	SUPPORT, PC BOARD	
9	* A-1135-929-A	BB BOARD, COMPLETE	
10	* A-1373-632-A	U BOARD, COMPLETE	
11	* 4-056-402-11	BRACKET, U	
12	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)	
13	⚠ 1-251-662-11	INLET, AC 3P(WITH NOISE FILTE)	
14	4-052-345-01	SCREW, (3X8) (+K), TAPPING	
15	4-329-127-00	CLAMP, CORD	
16	4-033-719-01	BUCKLE, A	
17	X-4035-090-1	COVER ASSY, REAR	15, 16
18	1-543-982-11	CORE, FERRITE	

5-2. FRONT COVER [W7000]

- ● 7-685-648-79 +BVTP 3X12
- ■ 7-685-663-79 +BVTP 4X16
- □ 7-683-421-04 HEXAGON SOCKET BOLT 4X12

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.



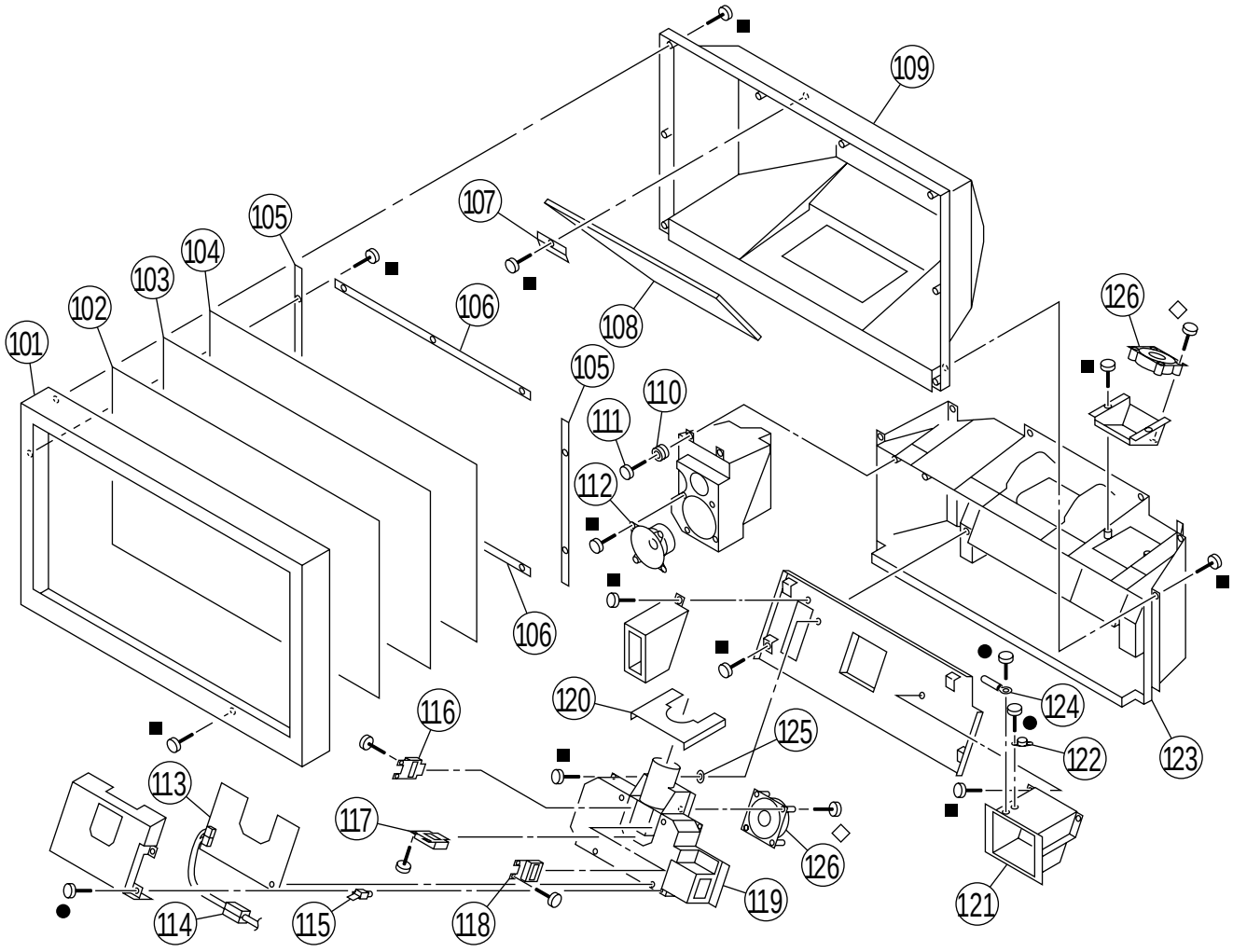
REF.NO.	PART NO.	DESCRIPTION	REMARK
51	X-4033-189-1	PANEL (L) ASSY, FRONT	52
52	4-054-709-01	STRIKE	
53	X-4033-188-1	PANEL (R) ASSY, FRONT	52
54	X-4035-092-1	DOOR ASSY, LAMP	70
55	X-4035-091-1	DOOR ASSY	
56	3-703-035-11	SHAFT, LID	
57	X-4035-093-1	COVER ASSY, FRONT	58-62
58	4-051-286-31	BUTTON, MULTI	
59	4-051-312-01	FILTER	
60	4-051-285-01	BUTTON, POWER	
61	4-820-917-01	SPRING, COMPRESSION	
62	4-838-438-00	LATCH	
63	1-505-207-11	SPEAKER (5.7CM)	
64	* A-1390-763-A	TB BOARD, COMPLETE	
65	* A-1390-762-A	TA BOARD, COMPLETE	
66	* A-1372-396-A	HB BOARD, COMPLETE	
67	* A-1372-395-A	HA BOARD, COMPLETE	
68	⚠ A-1482-758-A	LAMP BLOCK ASSY	69, 70
69	3-901-261-01	WASHER	
70	* 3-650-537-00	WASHER	
71	* 4-908-882-01	CLAMP	

5-3. SCREEN MIRROR BLOCK AND OPTICS UNIT [W7000]

● 7-685-648-79 +BVTP 3X12
■ 7-685-663-79 +BVTP 4X16
◇ 7-685-167-19 WASHER HEAD SCREW +P 4X35

The components identified by shading and mark ⚠ are critical for safety.
Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.



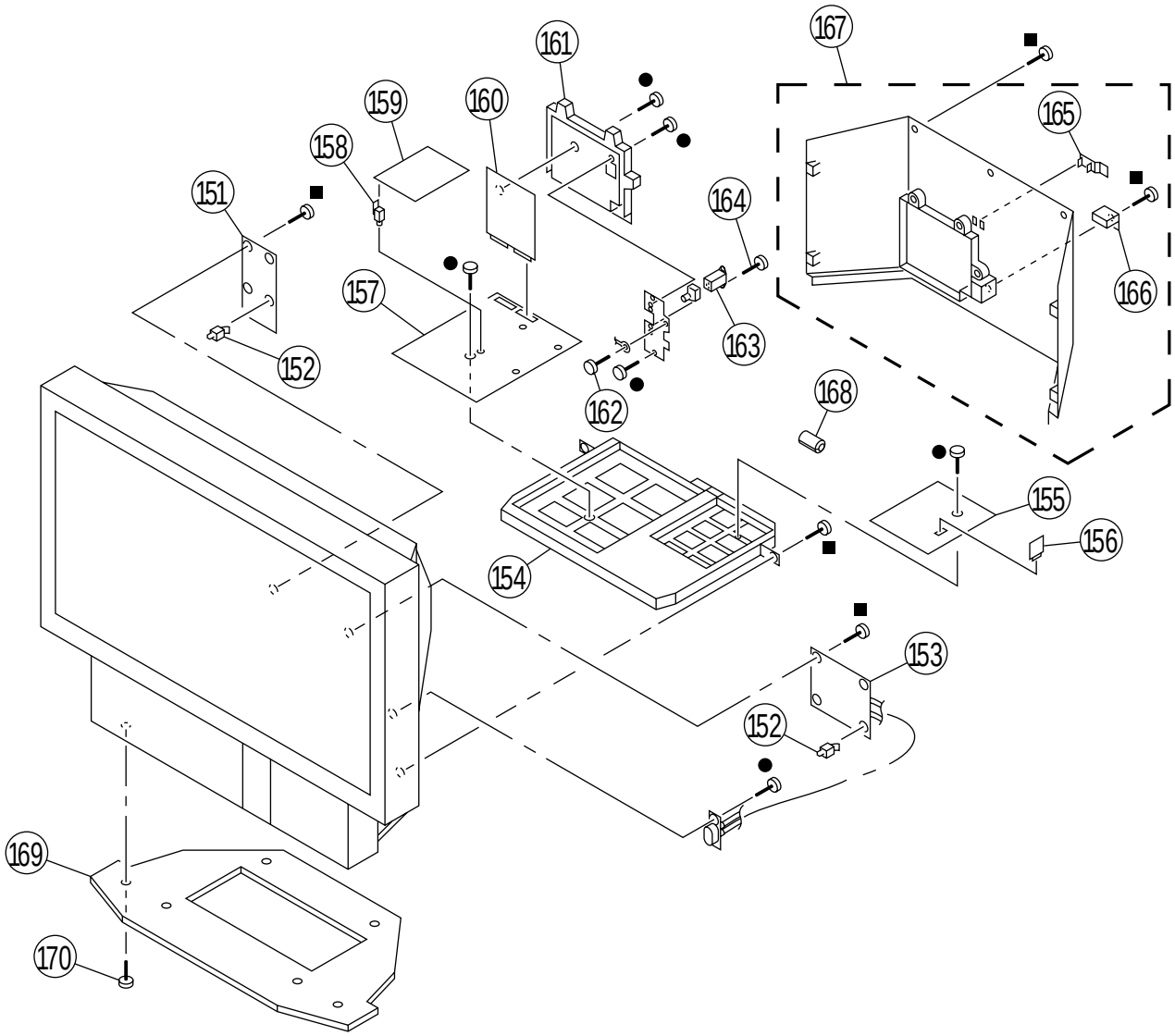
REF.NO.	PART NO.	DESCRIPTION	REMARK
101	X-4035-095-1	FRAME ASSY, SCREEN	
102	4-056-485-11	SCREEN, CONTRAST	
103	4-051-303-31	PLATE (L), DUFFUSION	
104	4-051-297-11	PLATE (F), DUFFUSION	
105	4-049-644-01	HOLDER, SCREEN (S1)	
106	*4-033-782-02	HOLDER (S), SCREEN	
107	*4-051-296-01	HOLDER, MIRROR	
108	4-051-283-01	MIRROR	
109	X-4035-096-1	COVER ASSY, MIRROR	
110	4-374-745-11	CUSHION (A)	
111	4-384-096-01	SCREW (4X16), TAPPING, +P	
112	1-505-208-11	SPEAKER (10CM)	
113	*A-1335-094-A	C BOARD, COMPLETE	
114	1-543-653-11	CORE ASSY, BEAD(DIVISION TYPE)	
115	*3-703-141-00	HOLDER, PRINTED CIRCUIT BOARD	
116	A-1501-135-A	PANEL BLOCK ASSY (B)	
117	A-1501-209-A	PANEL BLOCK ASSY (G)	
118	A-1501-133-A	PANEL BLOCK ASSY (R)	
119	⚠*1-475-523-11	OPTICAL UNIT	
120	*4-051-825-01	SHIELD, OPTICAL	
121	*4-051-343-01	BASE, LAMP	
122	⚠1-533-746-11	THERMOSTAT	
123	X-4035-094-1	CABINET ASSY	
124	*4-908-882-01	CLAMP	
125	4-830-092-01	WASHER, FIBER	
126	1-698-696-11	FAN, DC	

5-4. CHASSIS [W9000]

● 7-685-648-79 +BVTP 3X12
■ 7-685-663-79 +BVTP 4X16

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.



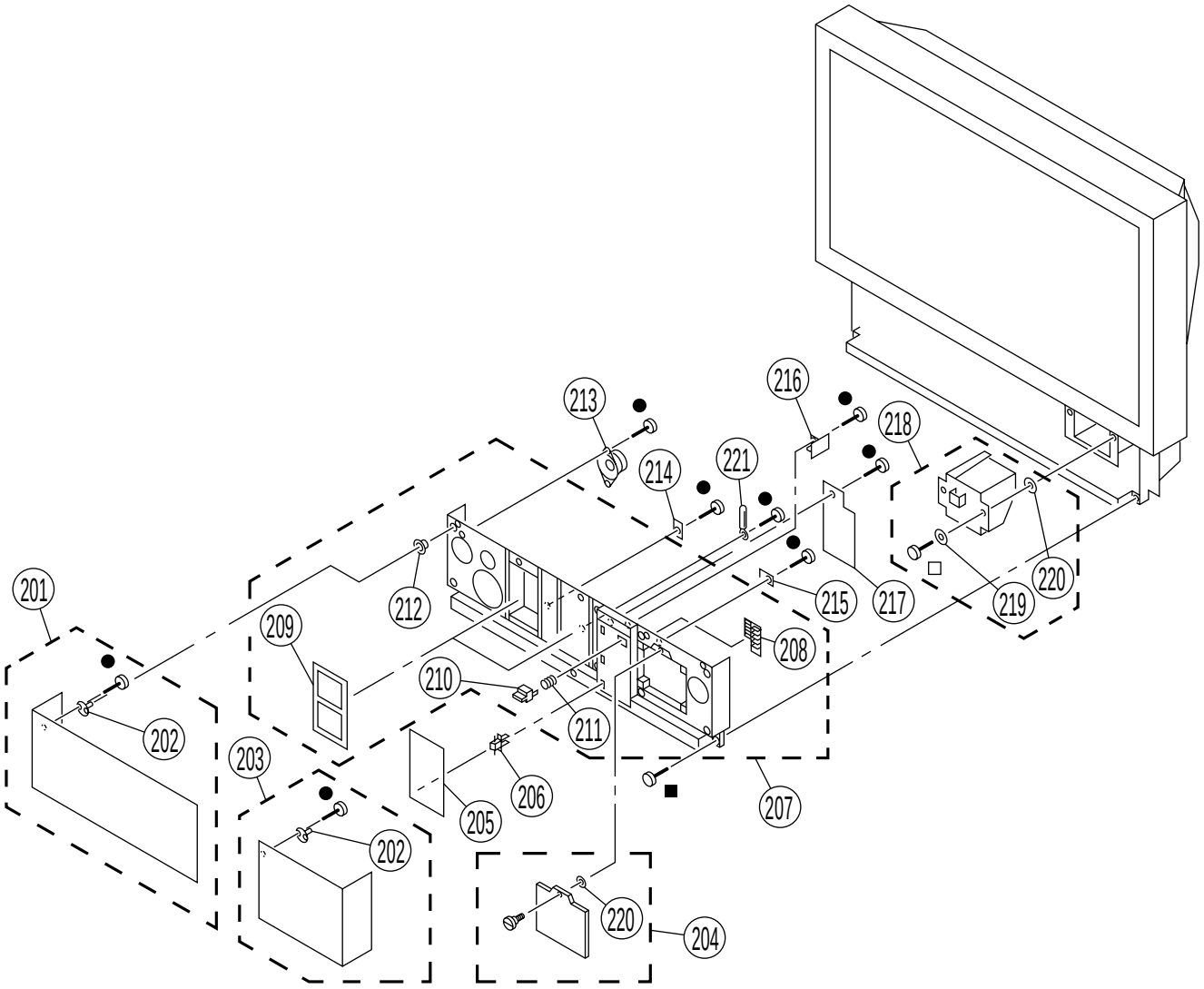
REF.NO.	PART NO.	DESCRIPTION	REMARK
151	*A-1380-551-A	K BOARD, COMPLETE	
152	*3-703-141-00	HOLDER, PRINTED CIRCUIT BOARD	
153	⚠1-473-545-13	POWER BLOCK	
154	*4-051-332-01	BRACKET, MAIN	
155	*A-1311-597-A	G BOARD, COMPLETE	
156	*A-1311-631-A	GA BOARD, COMPLETE	
157	*A-1298-254-A	A BOARD, COMPLETE	
158	*3-657-516-00	SUPPORT, PC BOARD	
159	*A-1135-929-A	BB BOARD, COMPLETE	
160	*A-1373-632-A	U BOARD, COMPLETE	
161	*4-056-402-11	BRACKET, U	
162	4-389-025-01	SCREW (M4) (EXT TOOTH WASHER)	
163	⚠1-251-662-11	INLET, AC 3P(WITH NOISE FILTE)	
165	4-329-127-00	CLAMP, CORD	
164	4-052-345-01	SCREW, (3X8) (+K), TAPPING	
166	4-033-719-01	BUCKLE, A	
167	X-4035-090-1	COVER ASSY, REAR	165, 166
168	1-543-982-11	CORE, FERRITE	
169	*4-057-132-01	PEDESTAL	
170	4-378-522-01	SCREW, TAPPING, HEXAGON HEAD	

5-5. FRONT COVER [W9000]

- ● 7-685-648-79 +BVTP 3X12
- ■ 7-685-663-79 +BVTP 4X16
- □ 7-683-421-04 HEXAGON SOCKET BOLT 4X12

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.



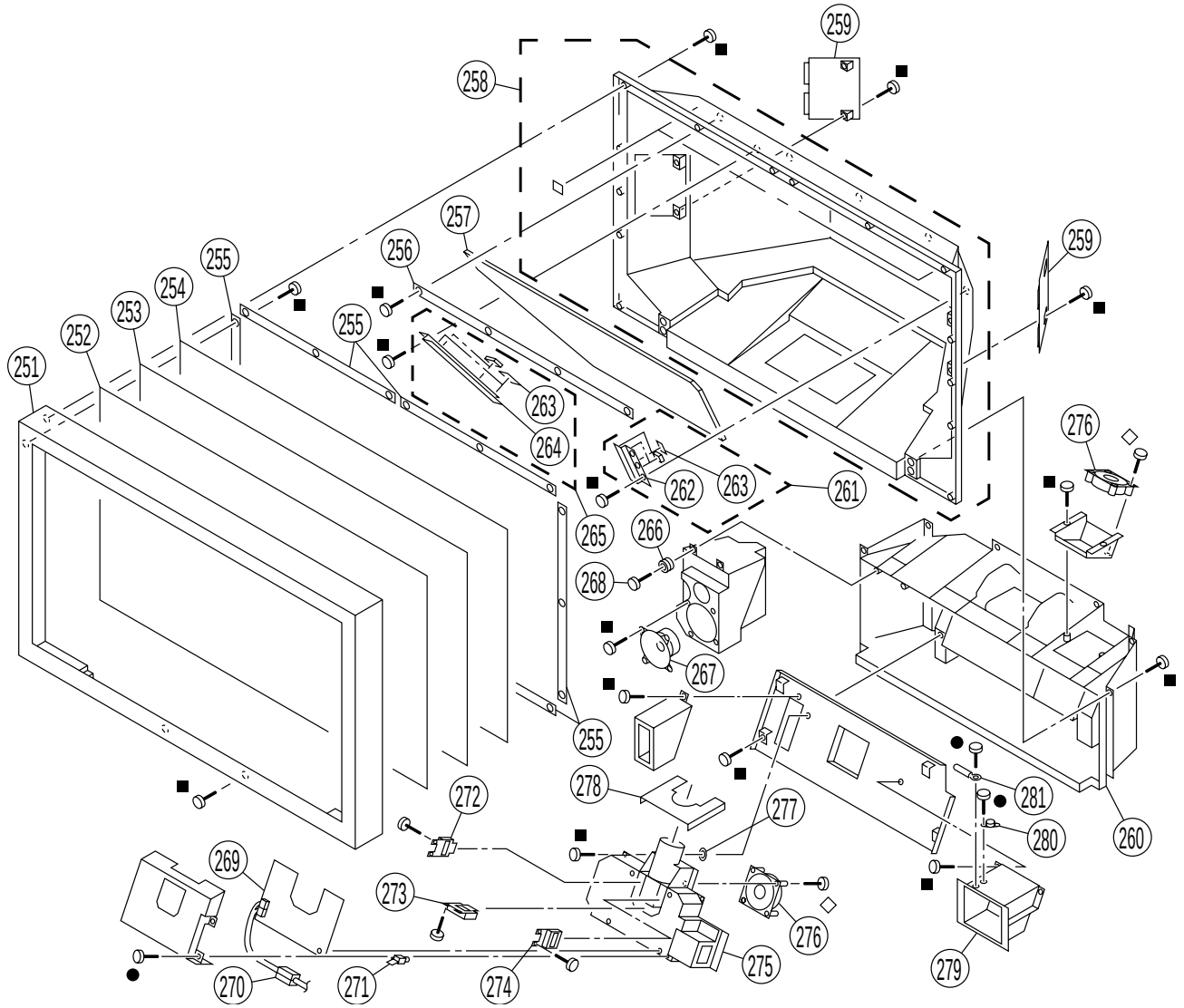
REF.NO.	PART NO.	DESCRIPTION	REMARK
201	X-4033-189-1	PANEL (L) ASSY, FRONT	202
202	4-054-709-01	STRIKE	
203	X-4033-188-1	PANEL (R) ASSY, FRONT	202
204	X-4035-092-1	DOOR ASSY, LAMP	220
205	X-4035-091-1	DOOR ASSY	
206	3-703-035-11	SHAFT, LID	
207	X-4035-093-1	COVER ASSY, FRONT	208-212
208	4-051-286-31	BUTTON, MULTI	
209	4-051-312-01	FILTER	
210	4-051-285-01	BUTTON, POWER	
211	4-820-917-01	SPRING, COMPRESSION	
212	4-838-438-00	LATCH	
213	1-505-207-11	SPEAKER (5.7CM)	
214	* A-1390-763-A	TB BOARD, COMPLETE	
215	* A-1390-762-A	TA BOARD, COMPLETE	
216	* A-1372-396-A	HB BOARD, COMPLETE	
217	* A-1372-395-A	HA BOARD, COMPLETE	
218	⚠ A-1501-247-A	LAMP BLOCK ASSY	219, 220
219	3-901-261-01	WASHER	
220	* 3-650-537-00	WASHER	
221	* 4-908-882-01	CLAMP	

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

5-6. SCREEN MIRROR BLOCK AND OPTICS UNIT [W9000]

● 7-685-648-79 +BVTP 3X12
■ 7-685-663-79 +BVTP 4X16
◇ 7-685-167-19 WASHER HEAD SCREW +P 4X35



REF.NO.		PART NO.	DESCRIPTION	REMARK
251		X-4035-095-1	FRAME ASSY, SCREEN	
252		4-056-485-11	SCREEN, CONTRAST	
253		4-054-229-11	PLATE (L), DUFFUSION	
254		4-054-230-11	PLATE (F), DUFFUSION	
255	*	4-055-161-01	HOLDER (50), SCREEN	
256	*	4-037-351-01	HOLDER, MIRROR	
257		4-055-162-11	MIRROR (50)	
258		X-4035-096-1	COVER ASSY, MIRROR	
259		4-055-165-11	COVER (50), SERVICE	
260		X-4035-094-1	CABINET ASSY	
261	*	X-4033-947-1	HOLDER (R) ASSY, MIRROR	262, 263
262		4-055-164-01	HOLDER (R), MIRROR	
263		4-864-324-11	SPACER	
264		4-055-163-01	HOLDER (L), MIRROR	
265	*	X-4033-946-1	HOLDER (L) ASSY, MIRROR	263, 264
266		4-374-745-11	CUSHION (A)	

REF.NO.		PART NO.	DESCRIPTION	REMARK
267		1-505-208-11	SPEAKER (10CM)	
268		4-384-096-01	SCREW (4X16), TAPPING, +P	
269	*	A-1335-094-A	C BOARD, COMPLETE	
270		1-543-653-11	CORE ASSY, BEAD(DIVISION TYPE)	
271	*	3-703-141-00	HOLDER, PRINTED CIRCUIT BOARD	
272		A-1501-135-A	PANEL BLOCK ASSY (B)	
273		A-1501-134-A	PANEL BLOCK ASSY (G)	
274		A-1501-133-A	PANEL BLOCK ASSY (R)	
275	⚠*	1-475-523-11	OPTICAL UNIT	
276		1-698-696-11	FAN, DC	
277		4-830-092-01	WASHER, FIBER	
278	*	4-051-825-01	SHIELD, OPTICAL	
279	*	4-051-343-01	BASE, LAMP	
280	⚠	1-533-746-11	THERMOSTAT	
281	*	4-908-882-01	CLAMP	

SECTION 6
ELECTRICAL PARTS LIST

BB

NOTE:

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

When indicating parts by reference number, please include the board name.

- All variable and adjustable resistors have characteristic curve B, unless otherwise noted.

RESISTORS
- All resistors are in ohms
- F : nonflammable

- Items marked " * " are not stocked since they are seldom required for routine service. Some delay should be anticipated when ordering these items.

REF.NO.	PART NO.	DESCRIPTION			REMARK
*	A-1135-929-A	BB BOARD, COMPLETE			
		**********			
	4-042-930-01	CASE (BOTTOM LID), SHIELD			
		<CAPACITOR>			
C3001	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3002	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3003	1-163-809-11	CERAMIC CHIP 0.047MF	10%		25V
C3004	1-107-823-11	CERAMIC CHIP 0.47MF	10%		16V
C3005	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3006	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3007	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3008	1-163-037-11	CERAMIC CHIP 0.022MF	10%		50V
C3009	1-164-489-11	CERAMIC CHIP 0.22MF	10%		16V
C3010	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3011	1-163-222-11	CERAMIC CHIP 5PF	0.25PF		50V
C3012	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3013	1-163-222-11	CERAMIC CHIP 5PF	0.25PF		50V
C3014	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3016	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3017	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3019	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3020	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3021	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3022	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3023	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3024	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3025	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3026	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3027	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3028	1-109-982-11	CERAMIC CHIP 1MF	10%		10V
C3029	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3030	1-109-982-11	CERAMIC CHIP 1MF	10%		10V
C3031	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3032	1-109-982-11	CERAMIC CHIP 1MF	10%		10V
C3035	1-126-964-11	ELECT	10MF	20%	50V
C3036	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3037	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3038	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3039	1-126-967-11	ELECT	47MF	20%	16V
C3041	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3042	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3043	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3044	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3045	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3046	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3047	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3048	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3049	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3050	1-127-532-11	ELECT(SOLID)	47MF	20%	6.3V
C3051	1-126-967-11	ELECT	47MF	20%	16V
C3052	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3053	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3054	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3055	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3056	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3057	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3058	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3060	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3061	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3062	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3071	1-126-935-11	ELECT	470MF	20%	16V
C3072	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C3202	1-163-239-11	CERAMIC CHIP 33PF		5%	50V
C3204	1-126-935-11	ELECT	470MF	20%	16V
C3205	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3213	1-126-935-11	ELECT	470MF	20%	16V
C3214	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C3215	1-126-967-11	ELECT	47MF	20%	16V
C3216	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C3221	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C3222	1-126-935-11	ELECT	470MF	20%	16V
C3227	1-163-038-91	CERAMIC CHIP 0.1MF			25V
C3228	1-126-967-11	ELECT	47MF	20%	16V
C3229	1-164-004-11	CERAMIC CHIP 0.1MF		10%	25V
C3230	1-126-967-11	ELECT	47MF	20%	16V
C3232	1-126-967-11	ELECT	47MF	20%	16V
C3233	1-126-967-11	ELECT	47MF	20%	16V
C3234	1-126-967-11	ELECT	47MF	20%	16V
C3235	1-126-967-11	ELECT	47MF	20%	16V
C3236	1-126-967-11	ELECT	47MF	20%	16V
C3237	1-126-967-11	ELECT	47MF	20%	16V
C3238	1-126-967-11	ELECT	47MF	20%	16V
C3240	1-126-964-11	ELECT	10MF	20%	50V
C3241	1-126-964-11	ELECT	10MF	20%	50V

BB

REF.NO.	PART NO.	DESCRIPTION				REMARK
C3242	1-126-964-11	ELECT	10MF	20%	50V	
C3243	1-126-964-11	ELECT	10MF	20%	50V	
C3244	1-163-113-00	CERAMIC CHIP	68PF	5%	50V	
C3303	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C3306	1-126-967-11	ELECT	47MF	20%	16V	
C3310	1-126-964-11	ELECT	10MF	20%	50V	
C3311	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C3313	1-126-967-11	ELECT	47MF	20%	16V	
C3314	1-126-964-11	ELECT	10MF	20%	50V	
C3316	1-126-967-11	ELECT	47MF	20%	16V	
C3318	1-163-038-91	CERAMIC CHIP	0.1MF		25V	
C3321	1-126-964-11	ELECT	10MF	20%	50V	
C3322	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C3324	1-126-967-11	ELECT	47MF	20%	16V	
		<CONNECTOR>				
CN3001*	1-564-522-11	PLUG, CONNECTOR 7P				
CN3002*	1-564-525-11	PLUG, CONNECTOR 10P				
CN3003*	1-564-526-31	PLUG, CONNECTOR 11P				
CN3004*	1-564-518-11	PLUG, CONNECTOR 3P				
		<FERRITE BEAD>				
FB3201	1-216-295-91	SHORT	0			
FB3202	1-216-295-91	SHORT	0			
FB3203	1-216-295-91	SHORT	0			
FB3205	1-216-295-91	SHORT	0			
FB3206	1-216-295-91	SHORT	0			
FB3207	1-216-295-91	SHORT	0			
FB3208	1-216-295-91	SHORT	0			
FB3209	1-216-295-91	SHORT	0			
FB3210	1-216-295-91	SHORT	0			
FB3211	1-216-295-91	SHORT	0			
FB3212	1-216-295-91	SHORT	0			
		<FILTER>				
FL3204	1-233-446-11	FILTER, LOW PASS				
FL3205	1-233-438-21	FILTER, LOW PASS				
FL3206	1-233-438-21	FILTER, LOW PASS				
FL3210	1-233-736-21	FILTER, EMI				
FL3212	1-234-016-21	FILTER, EMI				
FL3215	1-233-446-11	FILTER, LOW PASS				
FL3216	1-234-021-11	FILTER, LOW PASS				
FL3217	1-234-021-11	FILTER, LOW PASS				
FL3218	1-234-021-11	FILTER, LOW PASS				
FL3219	1-234-021-11	FILTER, LOW PASS				
FL3222	1-234-016-21	FILTER, EMI				
		<IC>				
IC3001	8-759-295-09	IC TLC2932IPW				
IC3002	8-759-295-09	IC TLC2932IPW				
IC3003	8-752-390-58	IC CXD2072AQ				
IC3004	8-759-478-46	IC MSM548332-25TS-K				
IC3005	8-759-478-46	IC MSM548332-25TS-K				
IC3006	8-759-478-92	IC TC7SET04FU(TE85R)				
IC3007	8-759-485-79	IC TC7SET08FU-TE85L				
IC3008	8-759-485-79	IC TC7SET08FU-TE85L				
IC3009	8-759-271-88	IC TC7SHU04FU				
IC3010	8-759-058-64	IC TC7S32FU(TE85R)				
IC3011	8-759-085-51	IC NJM2284M				
IC3301	8-752-386-04	IC CXD2303Q				
IC3303	8-759-431-14	IC PQ3TZ53U				
		<COIL>				
L3001	1-412-029-11	INDUCTOR CHIP	10UH			
L3002	1-408-409-00	INDUCTOR	10UH			
L3003	1-412-029-11	INDUCTOR CHIP	10UH			
L3004	1-412-029-11	INDUCTOR CHIP	10UH			
L3005	1-408-409-00	INDUCTOR	10UH			
L3006	1-408-409-00	INDUCTOR	10UH			
L3007	1-412-029-11	INDUCTOR CHIP	10UH			
L3008	1-412-029-11	INDUCTOR CHIP	10UH			
L3009	1-412-029-11	INDUCTOR CHIP	10UH			
L3010	1-412-029-11	INDUCTOR CHIP	10UH			
L3011	1-412-029-11	INDUCTOR CHIP	10UH			
L3012	1-412-029-11	INDUCTOR CHIP	10UH			
L3202	1-408-409-00	INDUCTOR	10UH			
L3204	1-412-029-11	INDUCTOR CHIP	10UH			
L3206	1-412-029-11	INDUCTOR CHIP	10UH			
L3207	1-412-029-11	INDUCTOR CHIP	10UH			
L3210	1-412-029-11	INDUCTOR CHIP	10UH			
L3303	1-412-029-11	INDUCTOR CHIP	10UH			
L3304	1-408-409-00	INDUCTOR	10UH			
L3305	1-412-029-11	INDUCTOR CHIP	10UH			
		<TRANSISTOR>				
Q3018	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3019	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3201	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3202	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3203	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3204	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3205	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3206	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3207	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3208	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3209	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3210	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3211	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3212	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3305	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3306	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3307	8-729-216-22	TRANSISTOR 2SA1162-G				
Q3308	8-729-216-22	TRANSISTOR 2SA1162-G				
		<RESISTOR>				
R3001	1-216-117-00	METAL GLAZE	680K	5%	1/10W	
R3002	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
R3003	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R3004	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3005	1-216-295-91	SHORT	0		
R3007	1-216-117-00	METAL GLAZE	680K	5%	1/10W
R3008	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R3009	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3010	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3011	1-216-295-91	SHORT	0		
R3013	1-216-013-00	METAL GLAZE	33	5%	1/10W
R3014	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R3015	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3016	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3017	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3018	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3019	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3020	1-216-295-91	SHORT	0		
R3021	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3022	1-216-295-91	SHORT	0		
R3023	1-216-295-91	SHORT	0		
R3029	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3030	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3032	1-216-633-11	METAL CHIP	180	0.50%	1/10W
R3037	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3038	1-216-633-11	METAL CHIP	180	0.50%	1/10W
R3044	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R3045	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R3047	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R3048	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R3049	1-216-295-91	SHORT	0		
R3051	1-216-633-11	METAL CHIP	180	0.50%	1/10W
R3201	1-216-295-91	SHORT	0		
R3202	1-216-295-91	SHORT	0		
R3203	1-216-295-91	SHORT	0		
R3204	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3205	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3206	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3213	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R3214	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R3215	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R3216	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3217	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3218	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3219	1-216-009-00	METAL GLAZE	22	5%	1/10W
R3220	1-216-009-00	METAL GLAZE	22	5%	1/10W
R3221	1-216-009-00	METAL GLAZE	22	5%	1/10W
R3225	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3226	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3227	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3228	1-216-029-00	METAL GLAZE	150	5%	1/10W
R3229	1-216-029-00	METAL GLAZE	150	5%	1/10W
R3230	1-216-029-00	METAL GLAZE	150	5%	1/10W
R3231	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R3232	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R3233	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R3234	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R3235	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R3236	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R3237	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3238	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3239	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3240	1-216-295-91	SHORT	0		
R3241	1-216-295-91	SHORT	0		
R3242	1-216-295-91	SHORT	0		
R3252	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R3253	1-216-029-00	METAL GLAZE	150	5%	1/10W
R3254	1-216-647-11	METAL CHIP	680	0.50%	1/10W
R3263	1-216-295-91	SHORT	0		
R3264	1-216-295-91	SHORT	0		
R3265	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3266	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3267	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3269	1-216-029-00	METAL GLAZE	150	5%	1/10W
R3271	1-216-295-91	SHORT	0		
R3272	1-216-029-00	METAL GLAZE	150	5%	1/10W
R3273	1-216-029-00	METAL GLAZE	150	5%	1/10W
R3274	1-216-295-91	SHORT	0		
R3275	1-216-295-91	SHORT	0		
R3276	1-216-029-00	METAL GLAZE	150	5%	1/10W
R3280	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3281	1-216-033-00	METAL GLAZE	220	5%	1/10W
R3282	1-216-009-00	METAL GLAZE	22	5%	1/10W
R3283	1-216-009-00	METAL GLAZE	22	5%	1/10W
R3284	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3285	1-216-041-00	METAL GLAZE	470	5%	1/10W
R3286	1-216-295-91	SHORT	0		
R3287	1-216-295-91	SHORT	0		
R3288	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R3289	1-216-649-11	METAL CHIP	820	0.50%	1/10W
R3301	1-216-295-91	SHORT	0		
R3302	1-216-295-91	SHORT	0		
R3305	1-216-025-91	METAL GLAZE	100	5%	1/10W
R3306	1-216-013-00	METAL GLAZE	33	5%	1/10W
R3307	1-216-295-91	SHORT	0		
R3308	1-216-013-00	METAL GLAZE	33	5%	1/10W
R3309	1-216-607-11	METAL CHIP	15	0.50%	1/10W
R3311	1-216-607-11	METAL CHIP	15	0.50%	1/10W
R3316	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3317	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3318	1-216-625-11	METAL CHIP	82	0.50%	1/10W
R3319	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R3321	1-216-627-11	METAL CHIP	100	0.50%	1/10W
R3322	1-216-639-11	METAL CHIP	330	0.50%	1/10W
R3325	1-216-295-91	SHORT	0		
R3332	1-216-013-00	METAL GLAZE	33	5%	1/10W
R3334	1-216-295-91	SHORT	0		
R3351	1-216-607-11	METAL CHIP	15	0.50%	1/10W
R3352	1-216-607-11	METAL CHIP	15	0.50%	1/10W
R3360	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3361	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3362	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3363	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R3364	1-216-049-91	METAL GLAZE	1K	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R3365	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3366	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3367	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3368	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3369	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3370	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3371	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3372	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3373	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3374	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3375	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3376	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3377	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3378	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3379	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3380	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3381	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3382	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
R3383	1-216-049-91	METAL GLAZE 1K	5%	1/10W	
		<CRYSTAL>			
X3001	1-767-262-11	VIBRATOR, CRYSTAL			
**********					
		* A-1298-254-A A BOARD, COMPLETE			
		**********			
	4-382-854-01	SCREW (M3X8), P, SW (+) (IC1007)			
		<CAPACITOR>			
C1001	1-104-664-11	ELECT 47MF	20%	25V	
C1004	1-126-967-11	ELECT 47MF	20%	16V	
C1007	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1013	1-104-664-11	ELECT 47MF	20%	25V	
C1014	1-104-664-11	ELECT 47MF	20%	25V	
C1015	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1016	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1017	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1018	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1019	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1020	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1021	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1022	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1102	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1103	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1104	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1107	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1108	1-126-925-11	ELECT 470MF	20%	10V	
C1110	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1113	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1114	1-163-237-11	CERAMIC CHIP 27PF	5%	50V	
C1117	1-163-237-11	CERAMIC CHIP 27PF	5%	50V	
C1120	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1121	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1126	1-107-909-11	ELECT 47MF	20%	10V	
C1127	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1128	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1129	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1130	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1131	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1132	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C1133	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1134	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1135	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1136	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1137	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	
C1140	1-163-259-91	CERAMIC CHIP 220PF	5%	50V	
C1141	1-104-760-11	CERAMIC CHIP 0.047MF	10%	50V	
C1142	1-126-960-11	ELECT 1MF	20%	50V	
C1144	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1145	1-163-259-91	CERAMIC CHIP 220PF	5%	50V	
C1146	1-126-960-11	ELECT 1MF	20%	50V	
C1401	1-126-967-11	ELECT 47MF	20%	16V	
C1402	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1403	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1404	1-126-767-11	ELECT 1000MF	20%	16V	
C1409	1-126-961-11	ELECT 2.2MF	20%	50V	
C1410	1-126-961-11	ELECT 2.2MF	20%	50V	
C1411	1-126-960-11	ELECT 1MF	20%	50V	
C1412	1-126-960-11	ELECT 1MF	20%	50V	
C1413	1-126-964-11	ELECT 10MF	20%	50V	
C1414	1-126-964-11	ELECT 10MF	20%	50V	
C1415	1-126-964-11	ELECT 10MF	20%	50V	
C1416	1-126-963-11	ELECT 4.7MF	20%	50V	
C1417	1-126-964-11	ELECT 10MF	20%	50V	
C1418	1-163-017-00	CERAMIC CHIP 0.0047MF	10%	50V	
C1419	1-126-964-11	ELECT 10MF	20%	50V	
C1434	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C1435	1-130-489-00	FILM 0.033MF	5%	50V	
C1436	1-137-399-11	FILM 0.1MF	5%	50V	
C1437	1-130-489-00	FILM 0.033MF	5%	50V	
C1438	1-130-489-00	FILM 0.033MF	5%	50V	
C1439	1-104-664-11	ELECT 47MF	20%	25V	
C1440	1-163-038-91	CERAMIC CHIP 0.1MF		25V	
C1442	1-126-934-11	ELECT 220MF	20%	16V	
C1443	1-163-259-91	CERAMIC CHIP 220PF	5%	50V	
C1601	1-126-967-11	ELECT 47MF	20%	10V	
C1602	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C1603	1-126-967-11	ELECT 47MF	20%	10V	
C1604	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C1605	1-163-243-11	CERAMIC CHIP 47PF	5%	50V	
C1608	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C1609	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C1610	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C1611	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C1612	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C1613	1-163-235-11	CERAMIC CHIP 22PF	5%	50V	
C1614	1-163-251-11	CERAMIC CHIP 100PF	5%	50V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C1616	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1617	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1618	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1619	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C1620	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C1621	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2001	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2002	1-107-909-11	ELECT	47MF	20%	16V
C2003	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2004	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2005	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2006	1-107-715-11	ELECT	22MF	20%	25V
C2007	1-126-964-11	ELECT	10MF	20%	50V
C2008	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2009	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2010	1-107-906-11	ELECT	10MF	20%	50V
C2011	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2012	1-107-906-11	ELECT	10MF	20%	50V
C2013	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2014	1-128-526-11	ELECT	100MF	20%	10V
C2015	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2017	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2018	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2019	1-107-909-11	ELECT	47MF	20%	10V
C2020	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2021	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2022	1-107-902-11	ELECT	1MF	20%	50V
C2023	1-107-902-11	ELECT	1MF	20%	50V
C2024	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2025	1-107-909-11	ELECT	47MF	20%	10V
C2026	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2027	1-163-227-11	CERAMIC CHIP	10PF	0.5PF	50V
C2028	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2029	1-107-909-11	ELECT	47MF	20%	10V
C2030	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2031	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2032	1-163-137-00	CERAMIC CHIP	680PF	5%	50V
C2033	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2034	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2035	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2036	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2037	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2038	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C2039	1-163-145-00	CERAMIC CHIP	0.0015MF	5%	50V
C2040	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2041	1-163-263-11	CERAMIC CHIP	330PF	5%	50V
C2042	1-107-909-11	ELECT	47MF	20%	10V
C2043	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2044	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2045	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2046	1-107-905-11	ELECT	4.7MF	20%	50V
C2047	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2048	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2049	1-107-909-11	ELECT	47MF	20%	10V
C2050	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2051	1-107-909-11	ELECT	47MF	20%	10V
C2052	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2053	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2054	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2055	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2057	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2058	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2059	1-107-909-11	ELECT	47MF	20%	10V
C2060	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2062	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2063	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2064	1-107-909-11	ELECT	47MF	20%	10V
C2065	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2066	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2067	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2068	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2069	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2070	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2071	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2072	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2073	1-107-909-11	ELECT	47MF	20%	10V
C2075	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C2076	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2077	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2078	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2079	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2080	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2081	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2082	1-107-906-11	ELECT	10MF	20%	50V
C2083	1-107-909-11	ELECT	47MF	20%	10V
C2084	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2085	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2086	1-107-902-11	ELECT	1MF	20%	50V
C2087	1-163-139-00	CERAMIC CHIP	820PF	10%	50V
C2088	1-107-906-11	ELECT	10MF	20%	50V
C2090	1-107-909-11	ELECT	47MF	20%	10V
C2091	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2093	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2096	1-107-909-11	ELECT	47MF	20%	10V
C2097	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2098	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2099	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C2101	1-107-909-11	ELECT	47MF	20%	16V
C2102	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2103	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2104	1-164-161-11	CERAMIC CHIP	0.0022MF	10%	50V
C2106	1-163-037-11	CERAMIC CHIP	0.022MF	10%	50V
C2107	1-107-902-11	ELECT	1MF	20%	50V
C2108	1-164-343-11	CERAMIC CHIP	0.056MF	10%	25V
C2109	1-107-909-11	ELECT	47MF	20%	10V
C2110	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2112	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2115	1-163-231-11	CERAMIC CHIP	15PF	5%	50V
C2116	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2117	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2118	1-107-906-11	ELECT	10MF	20%	50V
C2119	1-107-906-11	ELECT	10MF	20%	50V

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REF.NO.	PART NO.	DESCRIPTION			REMARK
C2120	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C2121	1-104-563-11	FILM CHIP	0.1MF	5%	16V
C2122	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C2123	1-104-563-11	FILM CHIP	0.1MF	5%	16V
C2124	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C2125	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C2126	1-107-909-11	ELECT	47MF	20%	16V
C2127	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2128	1-107-909-11	ELECT	47MF	20%	16V
C2129	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2130	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C2140	1-163-243-11	CERAMIC CHIP	47PF	5%	50V
C2190	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4002	1-163-235-11	CERAMIC CHIP	22PF	5%	50V
C4005	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C4006	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C4007	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C4008	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C4009	1-126-964-11	ELECT	10MF	20%	50V
C4010	1-126-960-11	ELECT	1MF	20%	50V
C4011	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C4012	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4013	1-126-933-11	ELECT	100MF	20%	16V
C4014	1-165-320-11	CERAMIC CHIP	0.47MF	10%	16V
C4015	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4016	1-126-964-11	ELECT	10MF	20%	50V
C4018	1-126-933-11	ELECT	100MF	20%	16V
C4019	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4021	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4022	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4023	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4025	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4026	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4027	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4028	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4029	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4030	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4031	1-107-909-11	ELECT	47MF	20%	16V
C4032	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4035	1-110-501-11	CERAMIC CHIP	0.33MF	10%	16V
C4036	1-110-501-11	CERAMIC CHIP	0.33MF	10%	16V
C4037	1-110-501-11	CERAMIC CHIP	0.33MF	10%	16V
C4039	1-163-275-11	CERAMIC CHIP	0.001MF	5%	50V
C4044	1-110-501-11	CERAMIC CHIP	0.33MF	10%	16V
C4045	1-110-501-11	CERAMIC CHIP	0.33MF	10%	16V
C4046	1-110-501-11	CERAMIC CHIP	0.33MF	10%	16V
C4047	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4048	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4049	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4050	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4051	1-163-113-00	CERAMIC CHIP	68PF	5%	50V
C4052	1-126-933-11	ELECT	100MF	20%	16V
C4053	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4055	1-126-964-11	ELECT	10MF	20%	50V
C4056	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4063	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4064	1-126-927-11	ELECT	2200MF	20%	10V
C4065	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4066	1-126-927-11	ELECT	2200MF	20%	10V
C4067	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4068	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C4069	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4071	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4072	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4073	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4080	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C4081	1-126-964-11	ELECT	10MF	20%	50V
C4085	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4090	1-126-967-11	ELECT	47MF	20%	16V
C4096	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4097	1-126-933-11	ELECT	100MF	20%	16V
C4098	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4099	1-126-933-11	ELECT	100MF	20%	16V
C4100	1-163-038-91	CERAMIC CHIP	0.1MF		25V
C4201	1-126-964-11	ELECT	10MF	20%	50V
C4202	1-126-964-11	ELECT	10MF	20%	50V
C4203	1-126-967-11	ELECT	47MF	20%	16V
C4204	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4205	1-126-933-11	ELECT	100MF	20%	16V
C4211	1-126-964-11	ELECT	10MF	20%	50V
C4212	1-126-964-11	ELECT	10MF	20%	50V
C4213	1-126-967-11	ELECT	47MF	20%	16V
C4221	1-126-964-11	ELECT	10MF	20%	50V
C4222	1-126-964-11	ELECT	10MF	20%	50V
C4223	1-126-967-11	ELECT	47MF	20%	16V
C4224	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C4225	1-126-933-11	ELECT	100MF	20%	16V
C4230	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4231	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C4232	1-126-967-11	ELECT	47MF	20%	16V

<CONNECTOR>

CN1001*	1-766-957-11	CONNECTOR, BOARD TO BOARD 20P
CN1002*	1-766-957-11	CONNECTOR, BOARD TO BOARD 20P
CN1003*	1-564-507-11	PLUG, CONNECTOR 4P
CN1005*	1-564-513-11	PLUG, CONNECTOR 10P
CN1006	1-764-812-11	CONNECTOR, BOARD TO BOARD 11P
CN1008*	1-564-506-11	PLUG, CONNECTOR 3P
CN1009*	1-564-512-11	PLUG, CONNECTOR 9P
CN1011*	1-564-506-11	PLUG, CONNECTOR 3P
CN1012*	1-564-512-11	PLUG, CONNECTOR 9P
CN1013	1-695-915-11	TAB (CONTACT)
CN1014	1-695-915-11	TAB (CONTACT)
CN1015	1-695-915-11	TAB (CONTACT)
CN1016	1-695-915-11	TAB (CONTACT)
CN1402*	1-564-511-11	PLUG, CONNECTOR 8P
CN4003*	1-564-511-11	PLUG, CONNECTOR 8P
CN4005	1-564-513-11	PLUG, CONNECTOR 10P
CN4006*	1-564-512-11	PLUG, CONNECTOR 9P

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D1011	8-719-404-49	DIODE MA111	
D1025	8-719-404-49	DIODE MA111	
D1031	8-719-158-15	ZENER DIODE RD5.6SB	
D1032	8-719-158-15	ZENER DIODE RD5.6SB	
D1102	8-719-404-49	DIODE MA111	
D1103	8-719-404-49	DIODE MA111	
D1104	8-719-158-15	ZENER DIODE RD5.6SB	
D1105	8-719-158-15	ZENER DIODE RD5.6SB	
D1401	8-719-158-39	ZENER DIODE RD10SB	
D1402	8-719-158-39	ZENER DIODE RD10SB	
D1405	8-719-404-49	DIODE MA111	
D1406	8-719-404-49	DIODE MA111	
D1407	8-719-404-49	DIODE MA111	
D1408	8-719-404-49	DIODE MA111	
D1601	8-719-801-78	DIODE 1SS184	
D1605	8-719-404-49	DIODE MA111	
D1606	8-719-404-49	DIODE MA111	
D2001	8-719-404-49	DIODE MA111	
D2002	8-719-031-68	DIODE HVU359TRF	
D2004	8-719-976-88	ZENER DIODE DTZ3.9B	
D2005	8-719-976-88	ZENER DIODE DTZ3.9B	
D2006	8-719-404-49	DIODE MA111	
D2008	8-719-404-49	DIODE MA111	
D2009	8-719-404-49	DIODE MA111	
D2010	8-719-404-49	DIODE MA111	
D2011	8-719-404-49	DIODE MA111	
D4001	8-719-404-49	DIODE MA111	
D4002	8-719-404-49	DIODE MA111	
D4005	8-719-031-68	DIODE HVU359TRF	
D4006	8-719-031-68	DIODE HVU359TRF	
D4007	8-719-031-68	DIODE HVU359TRF	
D4008	8-719-031-68	DIODE HVU359TRF	
D4009	8-719-031-68	DIODE HVU359TRF	
D4010	8-719-031-68	DIODE HVU359TRF	
D4011	8-719-031-68	DIODE HVU359TRF	
D4012	8-719-031-68	DIODE HVU359TRF	
		<FERRITE BEAD>	
FB1601	1-412-364-11	INDUCTOR 0UH	
FB1602	1-412-364-11	INDUCTOR 0UH	
FB2002	1-414-234-11	INDUCTOR 0UH	
FB2037	1-414-234-11	INDUCTOR 0UH	
		<FILTER>	
FL2001	1-239-847-11	FILTER, LOW PASS	
FL2002	1-233-535-11	FILTER, LOW PASS	
FL2003	1-233-534-11	FILTER, LOW PASS	
FL2004	1-233-535-11	FILTER, LOW PASS	
FL2005	1-233-536-11	FILTER, LOW PASS	
FL2006	1-233-536-11	FILTER, LOW PASS	
FL2007	1-239-847-11	FILTER, LOW PASS	
FL2015	1-233-539-21	FILTER, EMI	
FL2019	1-233-520-21	FILTER, EMI	
FL2020	1-233-520-21	FILTER, EMI	
FL2021	1-233-520-21	FILTER, EMI	
FL2022	1-233-520-21	FILTER, EMI	
		<IC>	
IC1007	8-759-390-51	IC UPC2409AHF	
IC1008	8-759-054-12	IC PQ09RA1	
IC1101	8-759-487-96	IC HD6473947-IT-OTP	
IC1102	8-759-352-91	IC PST9143NL	
IC1103	8-759-454-79	IC 24LC16BT/SN	
IC1106	8-759-013-86	IC MC74HC4066F	
IC1401	8-759-172-60	IC TA8776N	
IC1601	8-752-890-27	IC CXP853P40AQ-3-035	
IC1602	8-759-042-02	IC S-80743AL-A7-S	
IC2001	8-759-161-24	IC UPC659AGS-E2	
IC2003	8-759-296-53	IC UPC1862GS-E2	
IC2004	8-752-376-20	IC CXD2052Q	
IC2006	8-759-360-80	IC UPD6487GF-3BA	
IC2007	8-759-033-03	IC MC74F08M	
IC2008	8-759-167-20	IC UPD42280GU-30	
IC2009	8-759-297-80	IC MSM514222B-30GS-KR1	
IC2011	8-759-083-11	IC LA7217M	
IC2012	8-759-081-44	IC TC74VHC04F	
IC2101	8-759-150-61	IC UPC78L05T	
IC2102	8-759-150-61	IC UPC78L05T	
IC4001	8-759-009-46	IC MC14528BF	
IC4002	8-752-072-88	IC CXA2011Q	
IC4003	8-752-070-54	IC CXA1839Q-T6	
IC4004	8-752-058-68	IC CXA1315M	
IC4008	8-759-234-20	IC TC7S08F	
IC4009	8-759-300-71	IC HD14053BFP	
IC4011	8-752-072-88	IC CXA2011Q	
		<CHIP CONDUCTOR>	
JR4001	1-216-295-91	SHORT 0	
		<COIL>	
L1101	1-408-417-00	INDUCTOR 47UH	
L1102	1-408-417-00	INDUCTOR 47UH	
L1401	1-408-607-31	INDUCTOR 22UH	
L1402	1-408-607-31	INDUCTOR 22UH	
L1601	1-408-607-31	INDUCTOR 22UH	
L1602	1-408-403-00	INDUCTOR 3.3UH	
L2001	1-408-408-00	INDUCTOR 8.2UH	
L2002	1-408-398-00	INDUCTOR 1.2UH	
L2003	1-412-938-61	INDUCTOR 0.82UH	
L2004	1-408-398-00	INDUCTOR 1.2UH	
L2006	1-408-398-00	INDUCTOR 1.2UH	
L2007	1-408-398-00	INDUCTOR 1.2UH	
L2008	1-408-398-00	INDUCTOR 1.2UH	
L2009	1-408-412-00	INDUCTOR 18UH	
L2010	1-408-408-00	INDUCTOR 8.2UH	

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REF.NO.	PART NO.	DESCRIPTION	REMARK
L2011	1-408-412-00	INDUCTOR 18UH	
L4001	1-408-412-00	INDUCTOR 18UH	
L4002	1-408-409-00	INDUCTOR 10UH	
L4003	1-408-607-31	INDUCTOR 22UH	
L4004	1-408-409-00	INDUCTOR 10UH	
L4005	1-408-607-31	INDUCTOR 22UH	
L4006	1-408-607-31	INDUCTOR 22UH	
L4007	1-408-417-00	INDUCTOR 47UH	
L4008	1-408-607-31	INDUCTOR 22UH	
L4009	1-408-607-31	INDUCTOR 22UH	
L4010	1-408-607-31	INDUCTOR 22UH	
L4011	1-408-409-00	INDUCTOR 10UH	
		<TRANSISTOR>	
Q1101	8-729-422-54	TRANSISTOR XN4215	
Q1102	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1103	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1105	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1108	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1408	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1409	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q1410	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1601	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1602	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1603	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1604	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1605	8-729-216-22	TRANSISTOR 2SA1162-G	
Q1606	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q1607	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q1608	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2001	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2002	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2003	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2004	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2005	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2007	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2008	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2009	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2010	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2011	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2012	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2013	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2014	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2015	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2016	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2017	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2018	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2019	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2020	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2021	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2024	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2027	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2028	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2029	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2030	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2031	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2035	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2036	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2037	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2041	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2050	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2051	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2052	8-729-216-22	TRANSISTOR 2SA1162-G	
Q2061	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q2062	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4001	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4002	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4003	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4004	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4005	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4006	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4007	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4008	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4009	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4010	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4018	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4019	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4020	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4021	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4025	8-729-403-27	TRANSISTOR XN4401	
Q4026	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4027	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4028	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4034	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4035	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4041	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4043	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q4044	8-729-216-22	TRANSISTOR 2SA1162-G	
Q4045	8-729-216-22	TRANSISTOR 2SA1162-G	
		<RESISTOR>	
R1002	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1003	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1004	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1005	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1006	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R1011	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1012	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1013	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1014	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1015	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1016	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1017	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1018	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1101	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1102	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R1103	1-216-073-00	METAL GLAZE 10K 5% 1/10W	
R1104	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R1105	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1106	1-216-033-00	METAL GLAZE 220 5% 1/10W	
R1107	1-216-037-00	METAL GLAZE 330 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
R1108	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1111	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R1112	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1113	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1115	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1119	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1120	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1122	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1125	1-216-295-91	SHORT	0		
R1128	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1129	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1130	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1132	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R1133	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R1134	1-216-017-91	METAL GLAZE	47	5%	1/10W
R1135	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1138	1-216-017-91	METAL GLAZE	47	5%	1/10W
R1139	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1140	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1141	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1151	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1154	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1155	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1156	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1157	1-216-295-91	SHORT	0		
R1167	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1168	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1200	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1201	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1202	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1203	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1204	1-216-047-91	METAL GLAZE	820	5%	1/10W
R1205	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1402	1-216-295-91	SHORT	0		
R1403	1-216-295-91	SHORT	0		
R1405	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R1410	1-216-295-91	SHORT	0		
R1411	1-216-037-00	METAL GLAZE	330	5%	1/10W
R1412	1-216-037-00	METAL GLAZE	330	5%	1/10W
R1413	1-216-295-91	SHORT	0		
R1414	1-216-295-91	SHORT	0		
R1439	1-215-866-11	METAL OXIDE	330	5%	1W F
R1442	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1443	1-216-025-91	METAL GLAZE	100	5%	1/10W
R1444	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R1445	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R1446	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1447	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R1448	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1603	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1604	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1605	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1606	1-216-033-00	METAL GLAZE	220	5%	1/10W
R1607	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1608	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1609	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R1610	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1611	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1612	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1613	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1614	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1615	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1616	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1617	1-216-035-00	METAL GLAZE	270	5%	1/10W
R1618	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1619	1-216-039-00	METAL GLAZE	390	5%	1/10W
R1620	1-216-039-00	METAL GLAZE	390	5%	1/10W
R1621	1-216-039-00	METAL GLAZE	390	5%	1/10W
R1622	1-216-045-00	METAL GLAZE	680	5%	1/10W
R1623	1-216-045-00	METAL GLAZE	680	5%	1/10W
R1624	1-216-045-00	METAL GLAZE	680	5%	1/10W
R1625	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R1626	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1627	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1628	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1629	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R1630	1-216-295-91	SHORT	0		
R1646	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2001	1-216-081-00	METAL GLAZE	22K	5%	1/10W
R2002	1-216-001-00	METAL GLAZE	10	5%	1/10W
R2003	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2004	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R2005	1-216-055-00	METAL GLAZE	1.8K	5%	1/10W
R2006	1-216-017-91	METAL GLAZE	47	5%	1/10W
R2007	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R2008	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R2010	1-216-645-11	METAL CHIP	560	0.50%	1/10W
R2011	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2012	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R2013	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R2014	1-216-638-11	METAL CHIP	300	0.50%	1/10W
R2015	1-216-061-00	METAL GLAZE	3.3K	5%	1/10W
R2016	1-216-669-11	METAL CHIP	5.6K	0.50%	1/10W
R2017	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R2018	1-216-001-00	METAL GLAZE	10	5%	1/10W
R2019	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2021	1-216-039-00	METAL GLAZE	390	5%	1/10W
R2022	1-216-039-00	METAL GLAZE	390	5%	1/10W
R2024	1-216-683-11	METAL CHIP	22K	0.50%	1/10W
R2025	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R2026	1-216-023-00	METAL GLAZE	82	5%	1/10W
R2027	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2029	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2030	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2031	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2032	1-216-033-00	METAL GLAZE	220	5%	1/10W
R2033	1-216-033-00	METAL GLAZE	220	5%	1/10W
R2034	1-216-699-11	METAL CHIP	100K	0.50%	1/10W
R2035	1-216-665-11	METAL CHIP	3.9K	0.50%	1/10W
R2036	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R2037	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2038	1-216-693-11	METAL CHIP	56K	0.50%	1/10W

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R2039	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R2040	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R2042	1-216-035-00	METAL GLAZE	270	5%	1/10W
R2043	1-216-062-00	METAL GLAZE	3.6K	5%	1/10W
R2044	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R2045	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R2046	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2047	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2048	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2049	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R2050	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R2051	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2052	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R2053	1-216-043-91	METAL GLAZE	560	5%	1/10W
R2054	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R2055	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R2056	1-216-033-00	METAL GLAZE	220	5%	1/10W
R2057	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2059	1-216-295-91	SHORT	0		
R2060	1-216-295-91	SHORT	0		
R2061	1-216-295-91	SHORT	0		
R2062	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R2064	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R2065	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2066	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R2068	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2069	1-216-023-00	METAL GLAZE	82	5%	1/10W
R2071	1-216-043-91	METAL GLAZE	560	5%	1/10W
R2072	1-216-023-00	METAL GLAZE	82	5%	1/10W
R2073	1-216-033-00	METAL GLAZE	220	5%	1/10W
R2074	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R2076	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2077	1-216-295-91	SHORT	0		
R2078	1-216-295-91	SHORT	0		
R2079	1-216-634-11	METAL CHIP	200	0.50%	1/10W
R2080	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2081	1-216-295-91	SHORT	0		
R2082	1-216-295-91	SHORT	0		
R2083	1-216-295-91	SHORT	0		
R2084	1-216-634-11	METAL CHIP	200	0.50%	1/10W
R2087	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2088	1-216-047-91	METAL GLAZE	820	5%	1/10W
R2089	1-216-295-91	SHORT	0		
R2090	1-216-043-91	METAL GLAZE	560	5%	1/10W
R2091	1-216-634-11	METAL CHIP	200	0.50%	1/10W
R2094	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R2096	1-216-651-11	METAL CHIP	1K	0.50%	1/10W
R2097	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R2099	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R2100	1-216-047-91	METAL GLAZE	820	5%	1/10W
R2101	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2102	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2103	1-216-043-91	METAL GLAZE	560	5%	1/10W
R2108	1-216-643-11	METAL CHIP	470	0.50%	1/10W
R2109	1-216-033-00	METAL GLAZE	220	5%	1/10W
R2111	1-216-043-91	METAL GLAZE	560	5%	1/10W
R2112	1-216-295-91	SHORT	0		
R2113	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R2125	1-216-047-91	METAL GLAZE	820	5%	1/10W
R2129	1-216-043-91	METAL GLAZE	560	5%	1/10W
R2130	1-216-295-91	SHORT	0		
R2131	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R2132	1-216-295-91	SHORT	0		
R2133	1-216-295-91	SHORT	0		
R2135	1-216-101-00	METAL GLAZE	150K	5%	1/10W
R2141	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2144	1-216-295-91	SHORT	0		
R2145	1-216-623-11	METAL CHIP	68	0.50%	1/10W
R2150	1-216-025-91	METAL GLAZE	100	5%	1/10W
R2151	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2152	1-216-043-91	METAL GLAZE	560	5%	1/10W
R2153	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R2154	1-216-063-91	METAL GLAZE	3.9K	5%	1/10W
R2155	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2157	1-216-037-00	METAL GLAZE	330	5%	1/10W
R2158	1-216-037-00	METAL GLAZE	330	5%	1/10W
R2159	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2160	1-216-037-00	METAL GLAZE	330	5%	1/10W
R2161	1-216-037-00	METAL GLAZE	330	5%	1/10W
R2162	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2171	1-216-031-00	METAL GLAZE	180	5%	1/10W
R2172	1-216-045-00	METAL GLAZE	680	5%	1/10W
R2173	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R2174	1-216-695-11	METAL CHIP	68K	0.50%	1/10W
R2175	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R2176	1-216-687-11	METAL CHIP	33K	0.50%	1/10W
R2177	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R2178	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R2179	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2180	1-218-756-11	METAL CHIP	150K	0.50%	1/10W
R2181	1-216-697-91	METAL CHIP	82K	0.50%	1/10W
R2182	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2183	1-218-762-11	METAL CHIP	270K	0.50%	1/10W
R2184	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R2185	1-216-684-91	METAL CHIP	24K	0.50%	1/10W
R2191	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2192	1-216-041-00	METAL GLAZE	470	5%	1/10W
R2193	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2194	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2195	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R2196	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R2197	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2198	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R2200	1-216-035-00	METAL GLAZE	270	5%	1/10W
R2201	1-216-035-00	METAL GLAZE	270	5%	1/10W
R2202	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R2203	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2204	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2205	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R2211	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R2212	1-216-031-00	METAL GLAZE	180	5%	1/10W
R2213	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R2214	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R2215	1-216-053-00	METAL GLAZE	1.5K	5%	1/10W
R2216	1-216-031-00	METAL GLAZE	180	5%	1/10W
R4002	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R4003	1-216-680-11	METAL CHIP	16K	0.50%	1/10W
R4004	1-216-680-11	METAL CHIP	16K	0.50%	1/10W
R4005	1-216-680-11	METAL CHIP	16K	0.50%	1/10W
R4006	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R4007	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R4008	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R4009	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R4011	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R4012	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R4013	1-216-675-11	METAL CHIP	10K	0.50%	1/10W
R4018	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R4019	1-216-035-00	METAL GLAZE	270	5%	1/10W
R4020	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R4023	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4024	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4026	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4027	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4028	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4029	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4032	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4033	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4034	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4035	1-216-295-91	SHORT	0		
R4036	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R4040	1-216-133-00	METAL GLAZE	3.3M	5%	1/10W
R4042	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4044	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4046	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4047	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4048	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4050	1-216-083-00	METAL GLAZE	27K	5%	1/10W
R4051	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4052	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4063	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4064	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4065	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4066	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4067	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4081	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4089	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4090	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4091	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4092	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R4093	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4094	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4095	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R4096	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4103	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4104	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R4105	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4106	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R4107	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4108	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R4134	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4135	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R4136	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R4137	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4138	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R4139	1-216-089-91	METAL GLAZE	47K	5%	1/10W
R4140	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4142	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4143	1-216-295-91	SHORT	0		
R4150	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4160	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4161	1-216-295-91	SHORT	0		
R4162	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4164	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4165	1-216-295-91	SHORT	0		
R4166	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4170	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4171	1-216-295-91	SHORT	0		
R4172	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4301	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4302	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4303	1-216-295-91	SHORT	0		
R4304	1-216-023-00	METAL GLAZE	82	5%	1/10W
R4305	1-216-295-91	SHORT	0		
R4306	1-216-295-91	SHORT	0		
R4307	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4308	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4309	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4311	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4312	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4313	1-216-295-91	SHORT	0		
R4314	1-216-027-00	METAL GLAZE	120	5%	1/10W
R4315	1-216-295-91	SHORT	0		
R4316	1-216-295-91	SHORT	0		
R4317	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4318	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4319	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4321	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4322	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4323	1-216-295-91	SHORT	0		
R4324	1-216-027-00	METAL GLAZE	120	5%	1/10W
R4325	1-216-295-91	SHORT	0		
R4326	1-216-295-91	SHORT	0		
R4327	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4328	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4329	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4330	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R4331	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R4332	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R4333	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4334	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4335	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4340	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4341	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4342	1-216-041-00	METAL GLAZE	470	5%	1/10W

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The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
R4350	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4351	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4352	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4353	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4354	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R4360	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4361	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R4362	1-216-041-00	METAL GLAZE	470	5%	1/10W
R4369	1-216-025-91	METAL GLAZE	100	5%	1/10W
R4370	1-216-117-00	METAL GLAZE	680K	5%	1/10W
R4373	1-216-295-91	SHORT	0		
		<RESISTOR BLOCK>			
RB1101	1-236-404-11	NETWORK, RES 220			
RB1103	1-236-404-11	NETWORK, RES 220			
RB1105	1-236-400-11	NETWORK, RES 100			
RB1106	1-236-400-11	NETWORK, RES 100			
RB1107	1-236-404-11	NETWORK, RES 220			
RB1110	1-236-404-11	NETWORK, RES 220			
RB1111	1-236-404-11	NETWORK, RES 220			
RB1112	1-236-404-11	NETWORK, RES 220			
RB1113	1-236-404-11	NETWORK, RES 220			
RB1114	1-236-404-11	NETWORK, RES 220			
RB1601	1-236-400-11	NETWORK, RES 100			
RB1602	1-236-400-11	NETWORK, RES 100			
RB1603	1-236-400-11	NETWORK, RES 100			
RB1604	1-236-400-11	NETWORK, RES 100			
		<CRYSTAL>			
X1101	1-760-506-11	VIBRATOR, CRYSTAL			
X1601	1-579-125-11	VIBRATOR, CERAMIC			
X2001	1-760-892-21	VIBRATOR, CRYSTAL			
X2002	1-579-583-11	VIBRATOR, CERAMIC			
X2003	1-577-165-11	VIBLATOR, CERAMIC			

****

* A-1311-597-A G BOARD, COMPLETE
****

4-382-854-11 SCREW (M3X10), P, SW (+) (Q610, D601, D605, D606, D610, D611)
7-682-948-01 SCREW +PSW 3X8 (Q640)

<CAPACITOR>

C601	1-111-092-11	ELECT	0.001F	20%	35V
C602	1-126-967-11	ELECT	47MF	20%	50V
C603 ⚠	1-104-708-51	FILM	0.47MF	20%	250V
C604 ⚠	1-104-708-51	FILM	0.47MF	20%	250V
C605 ⚠	1-113-926-91	CERAMIC	0.0047MF		250V
C606 ⚠	1-113-926-91	CERAMIC	0.0047MF		250V
C607	1-126-941-11	ELECT	470MF	20%	25V
C608	1-104-664-11	ELECT	47MF	20%	25V
C609	1-126-929-11	ELECT	4700MF	20%	10V
C610	1-137-479-11	FILM	1MF	10%	400V
C611	1-113-607-11	ELECT(SOLID)	330MF	20%	400V
C612 ⚠	1-117-699-51	CERAMIC	0.001MF	99%	250V
C613 ⚠	1-117-699-51	CERAMIC	0.001MF	99%	250V
C614	1-126-937-11	ELECT	4700MF	20%	16V
C616	1-104-664-11	ELECT	47MF	20%	25V
C617	1-107-655-11	ELECT	47MF	20%	250V
C619	1-104-664-11	ELECT	47MF	20%	25V
C622	1-104-664-11	ELECT	47MF	20%	25V
C623	1-126-968-11	ELECT	100MF	20%	50V
C624	1-165-127-11	CERAMIC	470PF	10%	500V
C625	1-102-129-00	CERAMIC	0.01MF	10%	50V
C626	1-102-129-00	CERAMIC	0.01MF	10%	50V
C627	1-102-129-00	CERAMIC	0.01MF	10%	50V
C628	1-102-129-00	CERAMIC	0.01MF	10%	50V
C629	1-102-129-00	CERAMIC	0.01MF	10%	50V
C630	1-126-960-11	ELECT	1MF	20%	50V
C631 ⚠	1-113-900-51	CERAMIC	470PF	10%	250V
C635	1-136-165-00	FILM	0.1MF	5%	50V
C636	1-136-158-00	FILM	0.027MF	5%	50V
C639	1-136-173-00	FILM	0.47MF	5%	50V
C640	1-136-173-00	FILM	0.47MF	5%	50V
C641	1-165-127-11	CERAMIC	470PF	10%	500V
C642	1-126-965-11	ELECT	22MF	20%	50V
C643	1-126-963-11	ELECT	4.7MF	20%	50V
C644	1-104-664-11	ELECT	47MF	20%	25V
C645	1-136-153-00	FILM	0.01MF	5%	50V
C648	1-137-195-11	FILM	0.56MF	5%	50V
C649	1-137-195-11	FILM	0.56MF	5%	50V
C650	1-129-720-00	FILM	0.033MF	5%	630V
C651	1-165-127-11	CERAMIC	470PF	10%	500V
C652	1-165-127-11	CERAMIC	470PF	10%	500V
C660	1-104-665-11	ELECT	100MF	20%	25V
C661	1-126-933-11	ELECT	100MF	20%	10V
C682	1-126-963-11	ELECT	4.7MF	20%	50V
C701	1-115-732-11	ELECT	330MF	20%	10V
C702	1-104-664-11	ELECT	47MF	20%	25V
C703	1-104-664-11	ELECT	47MF	20%	25V
C704	1-102-129-00	CERAMIC	0.01MF	10%	50V
C705	1-136-153-00	FILM	0.01MF	5%	50V
C706	1-136-169-00	FILM	0.22MF	5%	50V

<CONNECTOR>

CN602*	1-564-509-11	PLUG, CONNECTOR 6P
CN604*	1-564-513-11	PLUG, CONNECTOR 10P
CN607*	1-564-511-11	PLUG, CONNECTOR 8P
CN608*	1-564-506-11	PLUG, CONNECTOR 3P
CN609*	1-564-506-11	PLUG, CONNECTOR 3P
CN610	1-695-915-11	TAB (CONTACT)
CN611*	1-691-960-21	PIN, CONNECTOR (PC BOARD) 3P
CN612	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P
CN613	1-691-960-11	PIN, CONNECTOR (PC BOARD) 3P
CN614*	1-774-511-11	CONNECTOR, BOARD TO BOARD 10P

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

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REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D601	8-719-052-92	DIODE D10SBS4F	
D603	8-719-510-09	DIODE D10SC6M	
D605	8-719-510-12	DIODE D10SC4M	
D606	8-719-510-12	DIODE D10SC4M	
D607	8-719-110-06	ZENER DIODE RD8.2ESB1	
D609	8-719-510-64	DIODE S2LA20F	
D610 ⚠	8-719-510-53	DIODE D4SB60L	
D611	8-719-029-04	DIODE D5L60	
D612	8-719-911-19	DIODE 1SS119-25	
D613	8-719-911-19	DIODE 1SS119-25	
D615	8-719-911-19	DIODE 1SS119-25	
D617	8-719-911-19	DIODE 1SS119-25	
D618	8-719-110-35	ZENER DIODE RD13ESB1	
D619	8-719-109-90	ZENER DIODE RD5.6ESB3	
D620	8-719-911-19	DIODE 1SS119-25	
D621	8-719-301-18	DIODE RM2CS	
D627	8-719-911-19	DIODE 1SS119-25	
D628	8-719-911-19	DIODE 1SS119-25	
D629	8-719-911-19	DIODE 1SS119-25	
D640	8-719-911-19	DIODE 1SS119-25	
D642	8-719-911-19	DIODE 1SS119-25	
D644	8-719-911-19	DIODE 1SS119-25	
D660	8-719-059-23	DIODE P6KE200AG23	
D661	8-719-947-06	DIODE RGP10JPKG23	
D662	8-719-052-90	DIODE D1NL40-TA2	
D664	8-719-911-19	DIODE 1SS119-25	
D703	8-719-510-64	DIODE S2LA20F	
D704	8-719-510-64	DIODE S2LA20F	
		<FUSE>	
F601 ⚠	1-576-233-11	FUSE (H.B.C.) (6.3A/250V)	
	1-533-223-11	HOLDER, FUSE ; F601	
		<FERRITE BEAD>	
FB610	1-410-396-41	INDUCTOR 0.45UH	
FB611	1-410-396-41	INDUCTOR 0.45UH	
FB612	1-410-396-41	INDUCTOR 0.45UH	
FB620	1-410-396-41	INDUCTOR 0.45UH	
FB621	1-410-396-41	INDUCTOR 0.45UH	
FB622	1-410-396-41	INDUCTOR 0.45UH	
		<IC>	
IC603	8-759-198-31	IC UPC1093J-1-T	
IC701	8-759-426-45	IC PWR-TOP210PFI	
IC702	8-759-198-31	IC UPC1093J-1-T	
		<COIL>	
L601	1-412-519-11	INDUCTOR 3.3UH	
L603	1-412-525-31	INDUCTOR 10UH	
L604	1-412-525-31	INDUCTOR 10UH	
L605	1-412-525-31	INDUCTOR 10UH	
L610	1-416-512-11	COIL, CHOKE	
L702	1-412-529-11	INDUCTOR 22UH	
		<PHOTO COUPLER>	
PH680	⚠8-749-010-65	PHOTO COUPLER PC123F2	
PH701	⚠8-749-010-65	PHOTO COUPLER PC123F2	
		<TRANSISTOR>	
Q602	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q603	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q604	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q605	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q606	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q607	8-729-119-78	TRANSISTOR 2SC2785-HFE	
Q610	8-729-041-65	TRANSISTOR 2SK2195F04	
Q615	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q640	8-729-039-65	TRNSISTOR MX0541B-F	
Q641	8-729-119-76	TRANSISTOR 2SA1175-HFE	
Q683	8-729-119-76	TRANSISTOR 2SA1175-HFE	
		<RESISTOR>	

REF.NO.	PART NO.	DESCRIPTION				REMARK
R601	1-249-425-11	CARBON	4.7K	5%	1/4W	
R602	1-249-417-11	CARBON	1K	5%	1/4W	
R603	1-249-417-11	CARBON	1K	5%	1/4W	
R604	1-215-865-11	METAL OXIDE	220	5%	1W	F
R606	1-249-389-11	CARBON	4.7	5%	1/4W	
R607	1-249-389-11	CARBON	4.7	5%	1/4W	
R610	1-216-361-00	METAL OXIDE	0.22	5%	2W	F
R611	1-216-350-11	METAL OXIDE	1.2	5%	1W	F
R612	1-247-895-91	CARBON	470K	5%	1/4W	
R613	1-247-895-91	CARBON	470K	5%	1/4W	
R614	1-247-863-91	CARBON	22K	5%	1/4W	
R617 ⚠	1-202-880-91	SOLID	330K	20%	1/2W	
R618	1-249-429-11	CARBON	10K	5%	1/4W	
R619	1-215-482-00	METAL	360K	1%	1/4W	
R620	1-215-482-00	METAL	360K	1%	1/4W	
R621	1-215-482-00	METAL	360K	1%	1/4W	
R622	1-249-435-11	CARBON	33K	5%	1/4W	
R623	1-215-427-00	METAL	1.8K	1%	1/4W	
R624	1-249-419-11	CARBON	1.5K	5%	1/4W	
R625	1-249-417-11	CARBON	1K	5%	1/4W	
R626	1-249-429-11	CARBON	10K	5%	1/4W	
R627	1-215-426-00	METAL	1.6K	1%	1/4W	
R628	1-249-425-11	CARBON	4.7K	5%	1/4W	
R629	1-249-421-11	CARBON	2.2K	5%	1/4W	
R630	1-247-863-91	CARBON	22K	5%	1/4W	
R631	1-247-807-31	CARBON	100	5%	1/4W	
R632	1-249-429-11	CARBON	10K	5%	1/4W	
R635	1-249-429-11	CARBON	10K	5%	1/4W	
R636	1-216-361-00	METAL OXIDE	0.22	5%	2W	F
R637	1-249-393-11	CARBON	10	5%	1/4W	
R638	1-215-477-00	METAL	220K	1%	1/4W	

G GA C

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

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REF.NO.	PART NO.	DESCRIPTION				REMARK
R639	1-215-479-00	METAL	270K	1%	1/4W	
R640 ⚠	1-220-926-21	FUSIBLE	0.47	10%	1/2W	F
R641	1-218-642-11	METAL OXIDE	100K	5%	1W	F
R642	1-218-642-11	METAL OXIDE	100K	5%	1W	F
R644	1-243-011-11	WIREWOUND	2.2	5%	5W	F
R645	1-215-865-11	METAL OXIDE	220	5%	1W	F
R646	1-249-429-11	CARBON	10K	5%	1/4W	
R647	1-249-429-11	CARBON	10K	5%	1/4W	
R648 ⚠	1-220-778-11	FUSIBLE	0.1	10%	1/2W	F
R649	1-218-642-11	METAL OXIDE	100K	5%	1W	F
R650	1-218-642-11	METAL OXIDE	100K	5%	1W	F
R658	1-215-886-11	METAL OXIDE	100	5%	2W	F
R659	1-260-306-51	CARBON	15	5%	1/2W	
R660	1-260-306-51	CARBON	15	5%	1/2W	
R661	1-249-389-11	CARBON	4.7	5%	1/4W	F
R664	1-215-479-00	METAL	270K	1%	1/4W	
R665	1-215-461-00	METAL	47K	1%	1/4W	
R666	1-249-417-11	CARBON	1K	5%	1/4W	
R667	1-249-421-11	CARBON	2.2K	5%	1/4W	
R668	1-249-421-11	CARBON	2.2K	5%	1/4W	
R669	1-249-429-11	CARBON	10K	5%	1/4W	
R670	1-247-815-91	CARBON	220	5%	1/4W	
R671	1-260-288-11	CARBON	0.47	5%	1/2W	
R685	1-249-425-11	CARBON	4.7K	5%	1/4W	
R686	1-249-417-11	CARBON	1K	5%	1/4W	
R687	1-249-417-11	CARBON	1K	5%	1/4W	
R688	1-249-429-11	CARBON	10K	5%	1/4W	
R702	1-249-441-11	CARBON	100K	5%	1/4W	
R703	1-215-445-00	METAL	10K	1%	1/4W	
R704	1-249-417-11	CARBON	1K	5%	1/4W	
R706	1-215-445-00	METAL	10K	1%	1/4W	
		<RELAY>				
RY601 ⚠	1-755-057-21	RELAY				
RY602	1-755-057-11	RELAY				
		<TRANSFORMER>				
T601 ⚠	1-429-180-11	TRANSFORMER, LINE FILTER				
T602 ⚠	1-431-624-11	TRANSFORMER, CONVERTER (PIT)				
T641 ⚠	1-429-992-11	TRANSFORMER, CONVERTER (PRT)				
T660 ⚠	1-431-625-11	TRANSFORMER, CONVERTER (SRT)				
		<THERMISTOR>				
TH601 ⚠	1-809-260-11	THERMISTOR, POWER				
		<VARISTOR>				
VDR601 ⚠	1-801-268-51	VARISTOR TNR14V471K660				

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	* A-1311-631-A	GA BOARD, COMPLETE				
		**********				
		<CAPACITOR>				
C811	1-136-165-00	FILM	0.1MF	5%	50V	
C814	1-136-169-00	FILM	0.22MF	5%	50V	
C815	1-136-153-00	FILM	0.01MF	5%	50V	
C816	1-137-364-11	FILM	0.001MF	5%	50V	
C817	1-136-165-00	FILM	0.1MF	5%	50V	
C818	1-136-165-00	FILM	0.1MF	5%	50V	
		<CONNECTOR>				
CN802	* 1-774-512-11	CONNECTOR, BPARD TO BOARD 10P				
		<DIODE>				
D831	8-719-911-19	DIODE 1SS119-25				
D832	8-719-110-57	ZENER DIODE RD22ESB2				
		<IC>				
IC801	8-759-482-62	IC MC33262P				
		<TRANSISTOR>				
Q821	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q822	8-729-119-78	TRANSISTOR 2SC2785-HFE				
Q823	8-729-119-76	TRANSISTOR 2SA1175-HFE				
		<RESISTOR>				
R841	1-249-429-11	CARBON	10K	5%	1/4W	
R842	1-249-429-11	CARBON	10K	5%	1/4W	
R843	1-249-429-11	CARBON	10K	5%	1/4W	
R844	1-247-863-91	CARBON	22K	5%	1/4W	
R845	1-249-401-11	CARBON	47	5%	1/4W	
R846	1-215-443-00	METAL	8.2K	1%	1/4W	
R848	1-249-429-11	CARBON	10K	5%	1/4W	

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REF.NO.	PART NO.	DESCRIPTION				REMARK
	* A-1335-094-A	C BOARD, COMPLETE				
		**********				
	4-382-854-01	SCREW (M3X8), P, SW (+)				
		<CAPACITOR>				
C5001	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V	
C5002	1-126-967-11	ELECT	47MF	20%	10V	
C5003	1-163-251-11	CERAMIC CHIP	100PF	5%	50V	
C5004	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V	
C5005	1-126-962-11	ELECT	3.3MF	20%	50V	

REF.NO.	PART NO.	DESCRIPTION			REMARK
C5006	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C5007	1-163-104-00	CERAMIC CHIP	30PF	5%	50V
C5008	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C5009	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5010	1-163-109-00	CERAMIC CHIP	47PF	5%	50V
C5011	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C5012	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5013	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5014	1-126-962-11	ELECT	3.3MF	20%	50V
C5015	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C5016	1-163-108-00	CERAMIC CHIP	43PF	5%	50V
C5017	1-163-009-11	CERAMIC CHIP	0.001MF	10%	50V
C5018	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5019	1-164-182-11	CERAMIC CHIP	0.0033MF	10%	50V
C5020	1-126-962-11	ELECT	3.3MF	20%	50V
C5021	1-164-004-11	CERAMIC CHIP	0.1MF	10%	25V
C5022	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5023	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5024	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5025	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5026	1-126-967-11	ELECT	47MF	20%	10V
C5027	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5028	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5029	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5030	1-104-664-11	ELECT	47MF	20%	25V
C5039	1-104-664-11	ELECT	47MF	20%	25V
C5040	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5041	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5042	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5043	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5044	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5045	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5046	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5047	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5048	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5049	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5050	1-163-251-11	CERAMIC CHIP	100PF	5%	50V
C5051	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C5054	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C5055	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C5056	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C5057	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C5058	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C5059	1-163-259-91	CERAMIC CHIP	220PF	5%	50V
C5073	1-164-232-11	CERAMIC CHIP	0.01MF	10%	50V
C5201	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5202	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5203	1-104-664-11	ELECT	47MF	20%	25V
C5204	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5205	1-104-664-11	ELECT	47MF	20%	25V
C5209	1-104-664-11	ELECT	47MF	20%	25V
C5210	1-104-664-11	ELECT	47MF	20%	25V
C5220	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5221	1-126-967-11	ELECT	47MF	20%	10V
C5222	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5225	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5226	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5227	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5228	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5229	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5230	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5231	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5232	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5240	1-126-967-11	ELECT	47MF	20%	10V
C5241	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5242	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5243	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5244	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5245	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5246	1-104-664-11	ELECT	47MF	20%	25V
C5247	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5248	1-126-964-11	ELECT	10MF	20%	50V
C5250	1-107-689-21	TANTAL. CHIP	1MF	20%	35V
C5251	1-107-689-21	TANTAL. CHIP	1MF	20%	35V
C5252	1-107-689-21	TANTAL. CHIP	1MF	20%	35V
C5260	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5261	1-104-664-11	ELECT	47MF	20%	25V
C5401	1-163-031-11	CERAMIC CHIP	0.01MF		50V
C5420	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5421	1-126-967-11	ELECT	47MF	20%	10V
C5422	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5425	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5426	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5427	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5428	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5429	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5430	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5431	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5432	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5440	1-126-967-11	ELECT	47MF	20%	10V
C5441	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5442	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5443	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5444	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5445	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5446	1-104-664-11	ELECT	47MF	20%	25V
C5447	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5448	1-126-964-11	ELECT	10MF	20%	50V
C5450	1-107-689-21	TANTAL. CHIP	1MF	20%	35V
C5451	1-107-689-21	TANTAL. CHIP	1MF	20%	35V
C5452	1-107-689-21	TANTAL. CHIP	1MF	20%	35V
C5460	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5461	1-104-664-11	ELECT	47MF	20%	25V
C5601	1-126-967-11	ELECT	47MF	20%	16V
C5602	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5620	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5621	1-126-967-11	ELECT	47MF	20%	10V
C5622	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5625	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5626	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5627	1-165-319-11	CERAMIC CHIP	0.1MF		50V
C5628	1-165-319-11	CERAMIC CHIP	0.1MF		50V

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REF.NO.	PART NO.	DESCRIPTION	REMARK
C5629	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5630	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5631	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5632	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5633	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5640	1-126-967-11	ELECT 47MF 20% 10V	
C5641	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5642	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5643	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5644	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5645	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5646	1-104-664-11	ELECT 47MF 20% 25V	
C5647	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5648	1-126-964-11	ELECT 10MF 20% 50V	
C5650	1-107-689-21	TANTAL. CHIP 1MF 20% 35V	
C5651	1-107-689-21	TANTAL. CHIP 1MF 20% 35V	
C5652	1-107-689-21	TANTAL. CHIP 1MF 20% 35V	
C5660	1-165-319-11	CERAMIC CHIP 0.1MF 50V	
C5661	1-104-664-11	ELECT 47MF 20% 25V	
		<CONNECTOR>	
CN5001	1-691-093-11	CONNECTOR, FFC (ZIF) 20P	
CN5002	1-691-093-11	CONNECTOR, FFC (ZIF) 20P	
CN5003	1-691-093-11	CONNECTOR, FFC (ZIF) 20P	
CN5201*	1-564-524-11	PLUG, CONNECTOR 9P	
CN5202*	1-564-525-11	PLUG, CONNECTOR 10P	
		<DIODE>	
D5001	8-719-002-81	DIODE 1T363	
D5002	8-719-002-81	DIODE 1T363	
D5003	8-719-002-81	DIODE 1T363	
D5034	8-719-976-96	ZENER DIODE DTZ4.7C	
D5035	8-719-976-96	ZENER DIODE DTZ4.7C	
D5040	8-719-404-49	DIODE MA111	
D5041	8-719-404-49	DIODE MA111	
D5043	8-719-420-51	DIODE MA729	
D5047	8-719-404-49	DIODE MA111	
D5048	8-719-404-49	DIODE MA111	
D5049	8-719-404-49	DIODE MA111	
		<FERRITE BEAD>	
FB5001	1-543-813-21	FILTER, EMI	
FB5002	1-543-813-21	FILTER, EMI	
FB5003	1-543-813-21	FILTER, EMI	
FB5004	1-543-813-21	FILTER, EMI	
FB5005	1-543-813-21	FILTER, EMI	
FB5010	1-543-813-21	FILTER, EMI	
FB5011	1-543-813-21	FILTER, EMI	
FB5012	1-543-813-21	FILTER, EMI	
FB5013	1-412-364-11	INDUCTOR 0UH	
FB5014	1-412-364-11	INDUCTOR 0UH	
FB5015	1-412-364-11	INDUCTOR 0UH	
FB5016	1-412-364-11	INDUCTOR 0UH	
FB5017	1-412-364-11	INDUCTOR 0UH	
FB5018	1-412-364-11	INDUCTOR 0UH	
FB5019	1-412-364-11	INDUCTOR 0UH	
FB5025	1-543-813-21	FILTER, EMI	
FB5026	1-543-813-21	FILTER, EMI	
FB5201	1-216-296-91	SHORT 0	
FB5401	1-216-296-91	SHORT 0	
FB5601	1-216-296-91	SHORT 0	
FB5602	1-412-364-11	INDUCTOR 0UH	
		<FILTER>	
FL5001	1-233-539-21	FILTER, EMI	
FL5002	1-233-539-21	FILTER, EMI	
FL5003	1-233-830-11	FILTER, EMI	
FL5004	1-233-830-11	FILTER, EMI	
FL5005	1-233-830-11	FILTER, EMI	
FL5007	1-239-400-11	FILTER, CHIP EMI	
FL5008	1-239-400-11	FILTER, CHIP EMI	
FL5009	1-239-400-11	FILTER, CHIP EMI	
FL5010	1-239-400-11	FILTER, CHIP EMI	
FL5012	1-233-513-21	FILTER, EMI	
FL5013	1-233-513-21	FILTER, EMI	
FL5014	1-233-513-21	FILTER, EMI	
FL5015	1-233-513-21	FILTER, EMI	
FL5016	1-233-539-21	FILTER, EMI	
FL5017	1-233-539-21	FILTER, EMI	
		<IC>	
IC5002	8-759-103-09	IC UPC4082G2	
IC5003	8-759-103-09	IC UPC4082G2	
IC5004	8-752-375-83	IC CXD2412AQ	
IC5005	8-759-324-92	IC PQ15RF16	
IC5006	8-759-098-24	IC PQ30RV11	
IC5007	8-759-701-56	IC NJM78M05FA	
IC5201	8-752-083-04	IC CXA3049AQ-T6	
IC5401	8-752-083-04	IC CXA3049AQ-T6	
IC5601	8-752-083-04	IC CXA3049AQ-T6	
IC5602	8-752-072-94	IC CXA1875AM-T4	
		<COIL>	
L5001	1-410-466-41	INDUCTOR 4.7UH	
L5002	1-427-791-21	TRANSFORMER, DETECTOR	
L5003	1-427-790-21	TRANSFORMER, DETECTOR	
L5004	1-427-792-21	TRANSFORMER, DETECTOR	
L5005	1-410-470-11	INDUCTOR 10UH	
L5202	1-410-470-11	INDUCTOR 10UH	
L5602	1-410-470-11	INDUCTOR 10UH	
		<TRANSISTOR>	
Q5001	8-729-920-21	TRANSISTOR DTC314TK-T-146	
Q5210	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q5410	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q5420	8-729-422-27	TRANSISTOR 2SD601A-Q	

REF.NO.	PART NO.	DESCRIPTION			REMARK
Q5610	8-729-422-27	TRANSISTOR 2SD601A-Q			
		<RESISTOR>			
R5001	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R5002	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R5003	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R5006	1-216-295-91	SHORT	0		
R5007	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5008	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5011	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5012	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5013	1-216-033-00	METAL GLAZE	220	5%	1/10W
R5017	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R5019	1-216-093-00	METAL GLAZE	68K	5%	1/10W
R5028	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R5029	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5030	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R5031	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5032	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R5033	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5034	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5035	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R5036	1-216-071-00	METAL GLAZE	8.2K	5%	1/10W
R5037	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5038	1-216-079-00	METAL GLAZE	18K	5%	1/10W
R5039	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5040	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R5041	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5042	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5043	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R5044	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R5045	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5046	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5047	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R5048	1-216-689-11	METAL GLAZE	39K	5%	1/10W
R5049	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5050	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5051	1-216-075-00	METAL GLAZE	12K	5%	1/10W
R5052	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5053	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5055	1-216-295-91	SHORT	0		
R5056	1-216-295-91	SHORT	0		
R5057	1-216-295-91	SHORT	0		
R5058	1-216-295-91	SHORT	0		
R5059	1-216-295-91	SHORT	0		
R5060	1-216-295-91	SHORT	0		
R5063	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5064	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5065	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5066	1-216-121-91	METAL GLAZE	1M	5%	1/10W
R5071	1-216-031-00	METAL GLAZE	180	5%	1/10W
R5072	1-216-031-00	METAL GLAZE	180	5%	1/10W
R5073	1-216-019-00	METAL GLAZE	56	5%	1/10W
R5074	1-216-019-00	METAL GLAZE	56	5%	1/10W
R5087	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5089	1-216-295-91	SHORT	0		
R5092	1-216-017-91	METAL GLAZE	47	5%	1/10W
R5093	1-216-017-91	METAL GLAZE	47	5%	1/10W
R5094	1-216-017-91	METAL GLAZE	47	5%	1/10W
R5096	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5097	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5098	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R5099	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R5100	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5101	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R5103	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R5107	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5108	1-216-664-11	METAL CHIP	3.6K	0.50%	1/10W
R5109	1-216-631-11	METAL CHIP	150	0.50%	1/10W
R5110	1-216-641-11	METAL CHIP	390	0.50%	1/10W
R5123	1-216-295-91	SHORT	0		
R5130	1-216-295-91	SHORT	0		
R5202	1-216-398-11	METAL OXIDE	5.6	5%	3W F
R5210	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5211	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5220	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5221	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R5226	1-216-295-91	SHORT	0		
R5228	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R5230	1-216-295-91	SHORT	0		
R5231	1-216-295-91	SHORT	0		
R5232	1-216-295-91	SHORT	0		
R5233	1-216-295-91	SHORT	0		
R5234	1-216-660-11	METAL CHIP	2.4K	0.50%	1/10W
R5235	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W
R5236	1-216-295-91	SHORT	0		
R5237	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5240	1-216-295-91	SHORT	0		
R5241	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5244	1-216-295-91	SHORT	0		
R5250	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5251	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5252	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5253	1-216-295-91	SHORT	0		
R5254	1-216-295-91	SHORT	0		
R5255	1-216-295-91	SHORT	0		
R5260	1-216-295-91	SHORT	0		
R5261	1-216-295-91	SHORT	0		
R5270	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5271	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5272	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5273	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5274	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5280	1-216-037-00	METAL GLAZE	330	5%	1/10W
R5283	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5284	1-216-295-91	SHORT	0		
R5290	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5324	1-216-295-91	SHORT	0		
R5401	1-216-077-00	METAL GLAZE	15K	5%	1/10W
R5402	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R5403	1-216-025-91	METAL GLAZE	100	5%	1/10W

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REF.NO.	PART NO.	DESCRIPTION			REMARK
R5410	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5411	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5420	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5421	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R5428	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5429	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5430	1-216-295-91	SHORT	0		
R5431	1-216-295-91	SHORT	0		
R5432	1-216-295-91	SHORT	0		
R5433	1-216-295-91	SHORT	0		
R5434	1-216-660-11	METAL CHIP	2.4K	0.50%	1/10W
R5435	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W
R5436	1-216-295-91	SHORT	0		
R5437	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5440	1-216-295-91	SHORT	0		
R5441	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5444	1-216-295-91	SHORT	0		
R5445	1-216-295-91	SHORT	0		
R5450	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5451	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5452	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5453	1-216-295-91	SHORT	0		
R5454	1-216-295-91	SHORT	0		
R5455	1-216-295-91	SHORT	0		
R5460	1-216-295-91	SHORT	0		
R5461	1-216-295-91	SHORT	0		
R5470	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5471	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5472	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5473	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5474	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5480	1-216-037-00	METAL GLAZE	330	5%	1/10W
R5483	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5484	1-216-295-91	SHORT	0		
R5490	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5524	1-216-295-91	SHORT	0		
R5610	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5611	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R5620	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5621	1-216-051-00	METAL GLAZE	1.2K	5%	1/10W
R5626	1-216-295-91	SHORT	0		
R5628	1-216-069-00	METAL GLAZE	6.8K	5%	1/10W
R5630	1-216-295-91	SHORT	0		
R5631	1-216-295-91	SHORT	0		
R5632	1-216-295-91	SHORT	0		
R5633	1-216-295-91	SHORT	0		
R5634	1-216-660-11	METAL CHIP	2.4K	0.50%	1/10W
R5635	1-216-666-11	METAL CHIP	4.3K	0.50%	1/10W
R5636	1-216-295-91	SHORT	0		
R5637	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5640	1-216-295-91	SHORT	0		
R5641	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R5644	1-216-295-91	SHORT	0		
R5650	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5651	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5652	1-216-111-91	METAL GLAZE	390K	5%	1/10W
R5653	1-216-295-91	SHORT	0		
R5654	1-216-295-91	SHORT	0		
R5655	1-216-295-91	SHORT	0		
R5660	1-216-295-91	SHORT	0		
R5661	1-216-295-91	SHORT	0		
R5670	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5671	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5672	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5673	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5674	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5680	1-216-037-00	METAL GLAZE	330	5%	1/10W
R5683	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5684	1-216-295-91	SHORT	0		
R5687	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5688	1-216-067-00	METAL GLAZE	5.6K	5%	1/10W
R5690	1-216-001-00	METAL GLAZE	10	5%	1/10W
R5691	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5692	1-216-025-91	METAL GLAZE	100	5%	1/10W
R5693	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R5694	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R5699	1-216-295-91	SHORT	0		
R5700	1-216-295-91	SHORT	0		
R5701	1-216-059-00	METAL GLAZE	2.7K	5%	1/10W
R5724	1-216-295-91	SHORT	0		

<RESISTOR BLOCK>

RB5001	1-236-404-11	NETWORK, RES 220	
RB5002	1-236-404-11	NETWORK, RES 220	
RB5003	1-236-400-11	NETWORK, RES 100	
RB5006	1-236-400-11	NETWORK, RES 100	
RB5007	1-236-400-11	NETWORK, RES 100	
RB5008	1-236-400-11	NETWORK, RES 100	
RB5011	1-236-404-11	NETWORK, RES 220	
RB5012	1-236-404-11	NETWORK, RES 220	
RB5201	1-236-972-11	NETWORK, RES 10	
RB5202	1-236-972-11	NETWORK, RES 10	
RB5401	1-236-972-11	NETWORK, RES 10	
RB5402	1-236-972-11	NETWORK, RES 10	
RB5601	1-236-972-11	NETWORK, RES 10	
RB5602	1-236-972-11	NETWORK, RES 10	

<VARIABLE RESISTOR>

RV5201	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(R-BIAS)
RV5202	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(R-VCOM)
RV5203	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(R-L GAIN)
RV5205	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(R GAIN)
RV5402	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(GLBS)
RV5403	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(G-BIAS)
RV5404	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(G-VCOM)
RV5405	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(G-L GAIN)
RV5407	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(G-GAIN)
RV5601	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K	(G-BIAS)

REF.NO.	PART NO.	DESCRIPTION	REMARK
RV5602	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (B-VCOM)	
RV5603	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (B-L GAIN)	
RV5605	1-241-394-11	RES, ADJ, METAL GLAZE 4.7K (B-GAIN)	
		<THERMISTOR>	
TH5401	1-806-715-11	THERMISTOR	

****

*	A-1372-395-A	HA BOARD, COMPLETE	
		**********	
	4-359-103-00	HOLDER, LED (D8002, D8005, D8007)	
		<CAPACITOR>	
C8001	1-124-779-00	ELECT 10MF 20% 16V	
C8005	1-126-193-11	ELECT 1MF 20% 50V	
C8006	1-126-193-11	ELECT 1MF 20% 50V	
C8101	1-126-193-11	ELECT 1MF 20% 50V	
C8102	1-126-193-11	ELECT 1MF 20% 50V	
C8103	1-126-193-11	ELECT 1MF 20% 50V	
		<CONNECTOR>	
CN8001*	1-564-525-11	PLUG, CONNECTOR 10P	
CN8002*	1-564-518-11	PLUG, CONNECTOR 3P	
CN8003	1-564-524-11	PLUG, CONNECTOR 9P	
CN8004	1-537-947-12	TERMINAL BOARD ASST, I/O	
CN8005*	1-564-524-11	PLUG, CONNECTOR 9P	
CN8006*	1-564-520-11	PLUG, CONNECTOR 5P	
CN8101	1-695-915-11	TAB (CONTACT)	
CN8102	1-695-915-11	TAB (CONTACT)	
		<DIODE>	
D8002	8-719-812-43	DIODE TLG124A	
D8005	8-719-812-41	DIODE TLR124	
D8007	8-719-812-44	DIODE TLO124	
D8008	8-719-016-73	DIODE STZ6.8T	
D8009	8-719-016-73	DIODE STZ6.8T	
D8011	8-719-016-73	DIODE STZ6.8T	
D8017	8-719-016-73	DIODE STZ6.8T	
D8018	8-719-016-73	DIODE STZ6.8T	
D8301	8-719-016-73	DIODE STZ6.8T	
D8302	8-719-016-73	DIODE STZ6.8T	
D8303	8-719-016-73	DIODE STZ6.8T	
D8304	8-719-016-73	DIODE STZ6.8T	
D8305	8-719-016-73	DIODE STZ6.8T	
		<FERRITE BEAD>	
FB131	1-414-233-21	INDUCTOR 0UH	
FB132	1-414-233-21	INDUCTOR 0UH	
FB133	1-414-233-21	INDUCTOR 0UH	
FB134	1-216-295-91	SHORT 0	
FB135	1-414-233-21	INDUCTOR 0UH	
FB136	1-414-233-21	INDUCTOR 0UH	
FB137	1-414-233-21	INDUCTOR 0UH	
FB138	1-414-233-21	INDUCTOR 0UH	
FB139	1-216-295-91	SHORT 0	
FB140	1-414-233-21	INDUCTOR 0UH	
		<FILTER>	
FL8001	1-233-512-21	FILTER, EMI	
FL8002	1-233-512-21	FILTER, EMI	
FL8003	1-233-512-21	FILTER, EMI	
FL8004	1-233-512-21	FILTER, EMI	
FL8005	1-233-512-21	FILTER, EMI	
FL8006	1-239-896-11	FILTER, EMI (SMD)	
FL8007	1-239-896-11	FILTER, EMI (SMD)	
FL8008	1-239-896-11	FILTER, EMI (SMD)	
		<IC>	
IC8001	8-742-010-11	HYB IC SBX1971-51	
		<JACK>	
J8001	1-565-839-11	PIN JACK BLOCK 3P	
J8002	1-774-753-11	JACK	
		<RESISTOR>	
R8002	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R8003	1-216-037-00	METAL GLAZE 330 5% 1/10W	
R8004	1-216-025-91	METAL GLAZE 100 5% 1/10W	
R8006	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R8008	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R8009	1-216-065-00	METAL GLAZE 4.7K 5% 1/10W	
R8010	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R8011	1-216-055-00	METAL GLAZE 1.8K 5% 1/10W	
R8012	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R8013	1-216-295-91	SHORT 0	
R8014	1-216-049-91	METAL GLAZE 1K 5% 1/10W	
R8015	1-216-045-00	METAL GLAZE 680 5% 1/10W	
R8016	1-216-295-91	SHORT 0	
R8019	1-216-295-91	SHORT 0	
R8020	1-216-075-00	METAL GLAZE 12K 5% 1/10W	
R8021	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R8022	1-216-105-91	METAL GLAZE 220K 5% 1/10W	
R8101	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R8102	1-216-017-91	METAL GLAZE 47 5% 1/10W	
R8103	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R8104	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R8105	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R8106	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R8107	1-216-029-00	METAL GLAZE 150 5% 1/10W	
R8108	1-216-029-00	METAL GLAZE 150 5% 1/10W	

REF.NO.	PART NO.	DESCRIPTION			REMARK
R8121	1-216-022-00	METAL GLAZE 75	5%	1/10W	
R8122	1-216-105-91	METAL GLAZE 220K	5%	1/10W	
R8123	1-216-105-91	METAL GLAZE 220K	5%	1/10W	
		<SWITCH>			
S8001	1-571-731-11	SWITCH, TACTIL (INPUT SELECT)			
S8003	1-571-731-11	SWITCH, TACTIL (ENTER)			
S8004	1-571-731-11	SWITCH, TACTIL (→)			
S8005	1-571-731-11	SWITCH, TACTIL (MENU)			
S8007	1-571-731-11	SWITCH, TACTIL (←)			
S8008	1-571-731-11	SWITCH, TACTIL (VOL –)			
S8009	1-571-731-11	SWITCH, TACTIL (↓)			
S8010	1-571-731-11	SWITCH, TACTIL (VOL +)			
S8011	1-571-731-11	SWITCH, TACTIL (↑)			
S8012	1-571-731-11	SWITCH, TACTIL (SIZE/CENTER)			
S8013	1-571-731-11	SWITCH, TACTIL (RESET)			
		**********			
*	A-1372-396-A	HB BOARD, COMPLETE			
		**********			
		<CONNECTOR>			
CN8031	*1-564-518-11	PLUG, CONNECTOR 3P			
		<SWITCH>			
S8031	1-570-826-11	SWITCH, PUSH (1 KEY) (POWER)			
		**********			
*	A-1373-632-A	U BOARD, COMPLETE			
		**********			
		<CAPACITOR>			
C1	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V	
C3	1-126-959-11	ELECT 0.47MF	20%	50V	
C6	1-126-959-11	ELECT 0.47MF	20%	50V	
C7	1-126-960-11	ELECT 1MF	20%	50V	
C8	1-126-960-11	ELECT 1MF	20%	50V	
C10	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V	
C301	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V	
C302	1-126-959-11	ELECT 0.47MF	20%	50V	
C303	1-126-959-11	ELECT 0.47MF	20%	50V	
C304	1-126-960-11	ELECT 1MF	20%	50V	
C305	1-126-960-11	ELECT 1MF	20%	50V	
C306	1-109-889-11	ELECT 1MF	20%	50V	
C307	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V	
C308	1-126-925-11	ELECT 470MF	20%	10V	
C309	1-126-959-11	ELECT 0.47MF	20%	50V	
C310	1-126-959-11	ELECT 0.47MF	20%	50V	
C313	1-126-925-11	ELECT 470MF	20%	10V	
C314	1-126-967-11	ELECT 47MF	20%	16V	
C315	1-126-967-11	ELECT 47MF	20%	16V	
C316	1-126-967-11	ELECT 47MF	20%	16V	
C317	1-126-967-11	ELECT 47MF	20%	16V	
C401	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C402	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C403	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C404	1-126-967-11	ELECT 47MF	20%	16V	
C405	1-126-967-11	ELECT 47MF	20%	16V	
C406	1-126-967-11	ELECT 47MF	20%	16V	
C407	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C408	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C409	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C410	1-126-967-11	ELECT 47MF	20%	16V	
C411	1-126-967-11	ELECT 47MF	20%	16V	
C412	1-126-967-11	ELECT 47MF	20%	16V	
C413	1-126-960-11	ELECT 1MF	20%	50V	
C414	1-126-960-11	ELECT 1MF	20%	50V	
C418	1-163-227-11	CERAMIC CHIP 10PF	0.5PF	50V	
C419	1-163-227-11	CERAMIC CHIP 10PF	0.5PF	50V	
C420	1-163-227-11	CERAMIC CHIP 10PF	0.5PF	50V	
C422	1-126-933-11	ELECT 100MF	20%	16V	
C501	1-104-664-11	ELECT 47MF	20%	25V	
C502	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C601	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C602	1-104-664-11	ELECT 47MF	20%	25V	
C604	1-128-551-11	ELECT 22MF	20%	25V	
C612	1-128-551-11	ELECT 22MF	20%	25V	
C613	1-126-933-11	ELECT 100MF	20%	16V	
C701	1-126-967-11	ELECT 47MF	20%	16V	
C702	1-163-009-11	CERAMIC CHIP 0.001MF	10%	50V	
C703	1-164-232-11	CERAMIC CHIP 0.01MF	10%	50V	
C704	1-126-963-11	ELECT 4.7MF	20%	50V	
C705	1-126-963-11	ELECT 4.7MF	20%	50V	
C706	1-164-004-11	CERAMIC CHIP 0.1MF	10%	25V	
C707	1-164-182-11	CERAMIC CHIP 0.0033MF	10%	50V	
C708	1-128-551-11	ELECT 22MF	20%	25V	
C709	1-126-960-11	ELECT 1MF	20%	50V	
C711	1-163-133-00	CERAMIC CHIP 470PF	5%	50V	
C712	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V	
C713	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V	
C714	1-164-489-11	CERAMIC CHIP 0.22MF	10%	16V	
		<CONNECTOR>			
CN1	*1-564-525-11	PLUG, CONNECTOR 10P			
CN2	*1-564-518-11	PLUG, CONNECTOR 3P			
CN3	*1-564-524-11	PLUG, CONNECTOR 9P			
CN4	*1-564-520-11	PLUG, CONNECTOR 5P			
CN601	*1-770-734-11	CONNECTOR, BOARD TO BOARD 20P			
CN602	*1-770-734-11	CONNECTOR, BOARD TO BOARD 20P			
CN603	1-537-947-12	TERMINAL BOARD ASST, I/O			

REF.NO.	PART NO.	DESCRIPTION	REMARK
		<DIODE>	
D1	8-719-158-39	ZENER DIODE RD10SB	
D5	8-719-158-39	ZENER DIODE RD10SB	
D6	8-719-158-39	ZENER DIODE RD10SB	
D7	8-719-158-39	ZENER DIODE RD10SB	
D8	8-719-158-39	ZENER DIODE RD10SB	
D10	8-719-158-39	ZENER DIODE RD10SB	
D201	8-719-976-99	ZENER DIODE DTZ5.1B	
D202	8-719-404-49	DIODE MA111	
D203	8-719-404-49	DIODE MA111	
D204	8-719-158-39	ZENER DIODE RD10SB	
D205	8-719-158-39	ZENER DIODE RD10SB	
D206	8-719-404-49	DIODE MA111	
D207	8-719-404-49	DIODE MA111	
D301	8-719-158-39	ZENER DIODE RD10SB	
D302	8-719-158-39	ZENER DIODE RD10SB	
D303	8-719-158-39	ZENER DIODE RD10SB	
D304	8-719-158-39	ZENER DIODE RD10SB	
D305	8-719-158-39	ZENER DIODE RD10SB	
D306	8-719-158-39	ZENER DIODE RD10SB	
D307	8-719-158-39	ZENER DIODE RD10SB	
D308	8-719-158-39	ZENER DIODE RD10SB	
D309	8-719-158-39	ZENER DIODE RD10SB	
D312	8-719-158-39	ZENER DIODE RD10SB	
D313	8-719-404-49	DIODE MA111	
D314	8-719-158-39	ZENER DIODE RD10SB	
D501	8-719-800-76	DIODE 1SS226	
D502	8-719-800-76	DIODE 1SS226	
D503	8-719-800-76	DIODE 1SS226	
D504	8-719-800-76	DIODE 1SS226	
D505	8-719-800-76	DIODE 1SS226	
D506	8-719-800-76	DIODE 1SS226	
D507	8-719-800-76	DIODE 1SS226	
D508	8-719-800-76	DIODE 1SS226	
D509	8-719-800-76	DIODE 1SS226	
D510	8-719-800-76	DIODE 1SS226	
D511	8-719-976-99	ZENER DIODE DTZ5.1B	
D512	8-719-976-99	ZENER DIODE DTZ5.1B	
D513	8-719-976-99	ZENER DIODE DTZ5.1B	
		<FERRITE BEAD>	
FB300	1-414-233-21	INDUCTOR 0UH	
FB301	1-414-233-21	INDUCTOR 0UH	
FB302	1-414-233-21	INDUCTOR 0UH	
FB303	1-414-233-21	INDUCTOR 0UH	
FB304	1-414-233-21	INDUCTOR 0UH	
FB312	1-216-295-91	SHORT 0	
FB313	1-216-295-91	SHORT 0	
FB314	1-414-233-21	INDUCTOR 0UH	
FB315	1-414-233-21	INDUCTOR 0UH	
FB317	1-216-295-91	SHORT 0	
FB318	1-216-295-91	SHORT 0	
FB319	1-414-233-21	INDUCTOR 0UH	
FB320	1-414-233-21	INDUCTOR 0UH	
FB321	1-216-295-91	SHORT 0	
FB322	1-216-295-91	SHORT 0	
FB323	1-414-233-21	INDUCTOR 0UH	
FB324	1-414-233-21	INDUCTOR 0UH	
FB325	1-216-295-91	SHORT 0	
FB326	1-216-295-91	SHORT 0	
FB327	1-216-295-91	SHORT 0	
FB328	1-216-295-91	SHORT 0	
FB330	1-216-295-91	SHORT 0	
FB331	1-216-295-91	SHORT 0	
		<FILTER>	
FL301	1-233-512-21	FILTER, EMI	
FL302	1-233-512-21	FILTER, EMI	
FL303	1-233-512-21	FILTER, EMI	
FL304	1-233-512-21	FILTER, EMI	
FL305	1-239-896-11	FILTER, EMI (SMD)	
FL306	1-239-896-11	FILTER, EMI (SMD)	
FL307	1-239-896-11	FILTER, EMI (SMD)	
FL308	1-233-512-21	FILTER, EMI	
FL315	1-233-512-21	FILTER, EMI	
FL316	1-233-512-21	FILTER, EMI	
FL317	1-233-512-21	FILTER, EMI	
		<IC>	
IC102	8-759-442-20	IC 24LC21A/SN	
IC103	8-759-442-20	IC 24LC21A/SN	
IC601	8-759-260-24	IC SN76861NJ-09	
IC801	8-759-360-07	IC BA7657F-E2	
IC802	8-752-073-52	IC CXA2016S	
		<JACK>	
J1	1-573-967-12	BLOCK, (S) TERMINAL	
J101	1-573-969-11	JACK BLOCK, PIN	
J301	1-573-970-11	BLOCK, (S) TERMINAL	
		<CHIP CONDUCTOR>	
JR11	1-216-295-91	SHORT 0	
		<COIL>	
L501	1-410-482-31	INDUCTOR 100UH	
L601	1-410-482-31	INDUCTOR 100UH	
		<TRANSISTOR>	
Q301	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q303	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q306	8-729-216-22	TRANSISTOR 2SA1162-G	
Q308	8-729-216-22	TRANSISTOR 2SA1162-G	
Q309	8-729-216-22	TRANSISTOR 2SA1162-G	
Q310	8-729-216-22	TRANSISTOR 2SA1162-G	
Q311	8-729-216-22	TRANSISTOR 2SA1162-G	

U

REF.NO.	PART NO.	DESCRIPTION	REMARK
Q312	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q313	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q314	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q315	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q316	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q317	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q602	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q603	8-729-422-27	TRANSISTOR 2SD601A-Q	
Q801	8-729-216-22	TRANSISTOR 2SA1162-G	
Q802	8-729-216-22	TRANSISTOR 2SA1162-G	
Q803	8-729-216-22	TRANSISTOR 2SA1162-G	
Q804	8-729-216-22	TRANSISTOR 2SA1162-G	
		<RESISTOR>	
R1	1-216-022-00	METAL GLAZE 75 5%	1/10W
R6	1-216-022-00	METAL GLAZE 75 5%	1/10W
R7	1-216-022-00	METAL GLAZE 75 5%	1/10W
R8	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R9	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R10	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R200	1-216-017-91	METAL GLAZE 47 5%	1/10W
R201	1-216-631-11	METAL CHIP 150 0.50%	1/10W
R202	1-216-631-11	METAL CHIP 150 0.50%	1/10W
R203	1-216-025-91	METAL GLAZE 100 5%	1/10W
R204	1-216-009-00	METAL GLAZE 22 5%	1/10W
R205	1-216-631-11	METAL CHIP 150 0.50%	1/10W
R206	1-216-631-11	METAL CHIP 150 0.50%	1/10W
R207	1-216-009-00	METAL GLAZE 22 5%	1/10W
R208	1-216-631-11	METAL CHIP 150 0.50%	1/10W
R209	1-216-631-11	METAL CHIP 150 0.50%	1/10W
R210	1-216-009-00	METAL GLAZE 22 5%	1/10W
R211	1-216-017-91	METAL GLAZE 47 5%	1/10W
R215	1-216-009-00	METAL GLAZE 22 5%	1/10W
R219	1-216-009-00	METAL GLAZE 22 5%	1/10W
R223	1-216-009-00	METAL GLAZE 22 5%	1/10W
R224	1-216-025-91	METAL GLAZE 100 5%	1/10W
R225	1-216-025-91	METAL GLAZE 100 5%	1/10W
R226	1-216-025-91	METAL GLAZE 100 5%	1/10W
R227	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R228	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R301	1-216-022-00	METAL GLAZE 75 5%	1/10W
R302	1-216-022-00	METAL GLAZE 75 5%	1/10W
R303	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R304	1-216-105-91	METAL GLAZE 220K 5%	1/10W
R305	1-216-021-00	METAL GLAZE 68 5%	1/10W
R306	1-216-021-00	METAL GLAZE 68 5%	1/10W
R307	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R308	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R311	1-216-022-00	METAL GLAZE 75 5%	1/10W
R312	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R313	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R314	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R317	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R318	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R319	1-216-021-00	METAL GLAZE 68 5%	1/10W
R322	1-216-113-00	METAL GLAZE 470K 5%	1/10W
R324	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R325	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R326	1-216-025-91	METAL GLAZE 100 5%	1/10W
R327	1-216-041-00	METAL GLAZE 470 5%	1/10W
R329	1-216-041-00	METAL GLAZE 470 5%	1/10W
R330	1-216-025-91	METAL GLAZE 100 5%	1/10W
R331	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R332	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R333	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R334	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R335	1-216-041-00	METAL GLAZE 470 5%	1/10W
R336	1-216-025-91	METAL GLAZE 100 5%	1/10W
R337	1-216-025-91	METAL GLAZE 100 5%	1/10W
R338	1-216-025-91	METAL GLAZE 100 5%	1/10W
R339	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R340	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R341	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R342	1-216-047-91	METAL GLAZE 820 5%	1/10W
R343	1-216-041-00	METAL GLAZE 470 5%	1/10W
R344	1-216-033-00	METAL GLAZE 220 5%	1/10W
R345	1-216-041-00	METAL GLAZE 470 5%	1/10W
R346	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R347	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R348	1-216-025-91	METAL GLAZE 100 5%	1/10W
R349	1-216-049-91	METAL GLAZE 1K 5%	1/10W
R350	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R351	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R352	1-216-047-91	METAL GLAZE 820 5%	1/10W
R353	1-216-041-00	METAL GLAZE 470 5%	1/10W
R354	1-216-035-00	METAL GLAZE 270 5%	1/10W
R355	1-216-041-00	METAL GLAZE 470 5%	1/10W
R356	1-216-081-00	METAL GLAZE 22K 5%	1/10W
R357	1-216-073-00	METAL GLAZE 10K 5%	1/10W
R358	1-216-025-91	METAL GLAZE 100 5%	1/10W
R378	1-216-035-00	METAL GLAZE 270 5%	1/10W
R379	1-216-035-00	METAL GLAZE 270 5%	1/10W
R401	1-216-295-91	SHORT 0	
R402	1-216-295-91	SHORT 0	
R403	1-216-029-00	METAL GLAZE 150 5%	1/10W
R404	1-216-029-00	METAL GLAZE 150 5%	1/10W
R405	1-216-029-00	METAL GLAZE 150 5%	1/10W
R406	1-216-041-00	METAL GLAZE 470 5%	1/10W
R407	1-216-041-00	METAL GLAZE 470 5%	1/10W
R408	1-216-041-00	METAL GLAZE 470 5%	1/10W
R409	1-216-009-00	METAL GLAZE 22 5%	1/10W
R410	1-216-009-00	METAL GLAZE 22 5%	1/10W
R411	1-216-009-00	METAL GLAZE 22 5%	1/10W
R501	1-216-017-91	METAL GLAZE 47 5%	1/10W
R502	1-216-017-91	METAL GLAZE 47 5%	1/10W
R503	1-216-017-91	METAL GLAZE 47 5%	1/10W
R504	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R505	1-216-065-00	METAL GLAZE 4.7K 5%	1/10W
R506	1-216-089-91	METAL GLAZE 47K 5%	1/10W
R507	1-216-017-91	METAL GLAZE 47 5%	1/10W
R508	1-216-057-00	METAL GLAZE 2.2K 5%	1/10W

REF.NO.	PART NO.	DESCRIPTION			REMARK
R509	1-216-295-91	SHORT	0		
R510	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R511	1-216-295-91	SHORT	0		
R512	1-216-033-00	METAL GLAZE	220	5%	1/10W
R513	1-216-033-00	METAL GLAZE	220	5%	1/10W
R514	1-216-295-91	SHORT	0		
R515	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R516	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R517	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R518	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R519	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R520	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R521	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R522	1-216-677-11	METAL CHIP	12K	0.50%	1/10W
R523	1-216-073-00	METAL GLAZE	10K	5%	1/10W
R524	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R525	1-216-295-91	SHORT	0		
R526	1-216-085-00	METAL GLAZE	33K	5%	1/10W
R527	1-216-057-00	METAL GLAZE	2.2K	5%	1/10W
R528	1-216-113-00	METAL GLAZE	470K	5%	1/10W
R529	1-216-025-91	METAL GLAZE	100	5%	1/10W
R530	1-216-025-91	METAL GLAZE	100	5%	1/10W
R531	1-216-065-00	METAL GLAZE	4.7K	5%	1/10W
R538	1-216-295-91	SHORT	0		
R540	1-216-295-91	SHORT	0		
R605	1-216-025-91	METAL GLAZE	100	5%	1/10W
R606	1-216-025-91	METAL GLAZE	100	5%	1/10W
R610	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R611	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R612	1-216-025-91	METAL GLAZE	100	5%	1/10W
R616	1-216-025-91	METAL GLAZE	100	5%	1/10W
R617	1-216-025-91	METAL GLAZE	100	5%	1/10W
R618	1-216-025-91	METAL GLAZE	100	5%	1/10W
R619	1-216-025-91	METAL GLAZE	100	5%	1/10W
R620	1-216-025-91	METAL GLAZE	100	5%	1/10W
R621	1-216-025-91	METAL GLAZE	100	5%	1/10W
R622	1-216-025-91	METAL GLAZE	100	5%	1/10W
R623	1-216-025-91	METAL GLAZE	100	5%	1/10W
R624	1-216-025-91	METAL GLAZE	100	5%	1/10W
R625	1-216-025-91	METAL GLAZE	100	5%	1/10W
R626	1-216-025-91	METAL GLAZE	100	5%	1/10W
R627	1-216-025-91	METAL GLAZE	100	5%	1/10W
R628	1-216-025-91	METAL GLAZE	100	5%	1/10W
R629	1-216-025-91	METAL GLAZE	100	5%	1/10W
R633	1-216-025-91	METAL GLAZE	100	5%	1/10W
R634	1-216-025-91	METAL GLAZE	100	5%	1/10W
R635	1-216-033-00	METAL GLAZE	220	5%	1/10W
R636	1-216-033-00	METAL GLAZE	220	5%	1/10W
R637	1-216-097-91	METAL GLAZE	100K	5%	1/10W
R642	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R658	1-216-049-91	METAL GLAZE	1K	5%	1/10W
R659	1-216-041-00	METAL GLAZE	470	5%	1/10W
R660	1-216-001-00	METAL GLAZE	10	5%	1/10W
R661	1-216-001-00	METAL GLAZE	10	5%	1/10W
R671	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R672	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R673	1-216-099-00	METAL GLAZE	120K	5%	1/10W
R679	1-216-025-91	METAL GLAZE	100	5%	1/10W
R680	1-216-025-91	METAL GLAZE	100	5%	1/10W

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* A-1380-551-A K BOARD, COMPLETE
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7-682-948-01 SCREW +PSW 3X8 (IC8501, IC8503)

<CAPACITOR>

C8501	1-126-967-11	ELECT	47MF	20%	16V
C8502	1-126-967-11	ELECT	47MF	20%	16V
C8503	1-126-967-11	ELECT	47MF	20%	16V
C8504	1-136-165-00	FILM	0.1MF	5%	50V
C8505	1-126-041-11	ELECT	2200MF	20%	35V
C8506	1-136-165-00	FILM	0.1MF	5%	50V
C8507	1-126-041-11	ELECT	2200MF	20%	35V
C8508	1-126-964-11	ELECT	10MF	20%	50V
C8509	1-137-372-11	FILM	0.022MF	5%	50V
C8510	1-137-372-11	FILM	0.022MF	5%	50V
C8511	1-126-965-11	ELECT	22MF	20%	50V
C8512	1-126-967-11	ELECT	47MF	20%	16V
C8513	1-126-960-11	ELECT	1MF	20%	50V
C8515	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C8516	1-126-967-11	ELECT	47MF	20%	16V
C8517	1-137-372-11	FILM	0.022MF	5%	50V
C8518	1-137-372-11	FILM	0.022MF	5%	50V
C8519	1-126-961-11	ELECT	2.2MF	20%	50V
C8520	1-126-964-11	ELECT	10MF	20%	50V
C8521	1-126-961-11	ELECT	2.2MF	20%	50V
C8522	1-126-967-11	ELECT	47MF	20%	16V
C8523	1-136-165-00	FILM	0.1MF	5%	50V
C8524	1-124-701-11	ELECT	470MF	20%	25V
C8525	1-136-165-00	FILM	0.1MF	5%	50V
C8526	1-124-701-11	ELECT	470MF	20%	25V
C8527	1-126-967-11	ELECT	47MF	20%	16V
C8528	1-137-371-11	FILM	0.015MF	5%	50V
C8529	1-126-964-11	ELECT	10MF	20%	50V
C8531	1-137-371-11	FILM	0.015MF	5%	50V
C8532	1-137-371-11	FILM	0.015MF	5%	50V
C8535	1-126-965-11	ELECT	22MF	20%	50V
C8536	1-126-960-11	ELECT	1MF	20%	50V
C8537	1-107-630-11	ELECT	2200MF	20%	50V
C8538	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C8539	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C8540	1-126-967-11	ELECT	47MF	20%	16V
C8541	1-104-664-11	ELECT	47MF	20%	25V
C8550	1-130-489-00	FILM	0.033MF	5%	50V
C8551	1-161-772-11	CERAMIC	0.1MF	10%	25V
C8552	1-161-772-11	CERAMIC	0.1MF	10%	25V
C8553	1-102-121-00	CERAMIC	0.0022MF	10%	50V
C8554	1-102-121-00	CERAMIC	0.0022MF	10%	50V

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

REF.NO.	PART NO.	DESCRIPTION			REMARK
		<CONNECTOR>			
CN8501*	1-564-521-11	PLUG, CONNECTOR 6P			
CN8502*	1-564-518-11	PLUG, CONNECTOR 3P			
CN8503*	1-564-519-11	PLUG, CONNECTOR 4P			
CN8505*	1-564-523-11	PLUG, CONNECTOR 8P			
		<DIODE>			
D8501	8-719-110-72	ZENER DIODE RD30ESB2			
D8502	8-719-110-72	ZENER DIODE RD30ESB2			
		<IC>			
IC8501	8-759-980-43	IC TDA2009A			
IC8502	8-759-145-58	IC UPC4558C			
IC8503	8-759-980-43	IC TDA2009A			
IC8504	8-759-145-58	IC UPC4558C			
		<IC LINK>			
PS8501⚠	1-532-984-91	LINK, IC (2A/90V AC, 60V DC)			
PS8502⚠	1-532-984-91	LINK, IC (2A/90V AC, 60V DC)			
		<TRANSISTOR>			
Q8501	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q8502	8-729-119-78	TRANSISTOR 2SC2785-HFE			
Q8503	8-729-119-78	TRANSISTOR 2SC2785-HFE			
		<RESISTOR>			
R8501	1-215-421-00	METAL	1K	1% 1/4W	
R8502	1-215-429-00	METAL	2.2K	1% 1/4W	
R8503	1-215-421-00	METAL	1K	1% 1/4W	
R8504	1-215-383-00	METAL	27	1% 1/4W	
R8505	1-249-385-11	CARBON	2.2	5% 1/4W	F
R8506	1-249-421-11	CARBON	2.2K	5% 1/4W	
R8507	1-249-385-11	CARBON	2.2	5% 1/4W	F
R8508	1-249-421-11	CARBON	2.2K	5% 1/4W	
R8509	1-215-455-00	METAL	27K	1% 1/4W	
R8510	1-249-429-11	CARBON	10K	5% 1/4W	
R8511	1-215-383-00	METAL	27	1% 1/4W	
R8512	1-215-463-00	METAL	56K	1% 1/4W	
R8513	1-215-421-00	METAL	1K	1% 1/4W	
R8514	1-247-843-11	CARBON	3.3K	5% 1/4W	
R8515	1-249-429-11	CARBON	10K	5% 1/4W	
R8516	1-215-463-00	METAL	56K	1% 1/4W	
R8517	1-215-455-00	METAL	27K	1% 1/4W	
R8518	1-215-421-00	METAL	1K	1% 1/4W	
R8519	1-215-421-00	METAL	1K	1% 1/4W	
R8520	1-247-843-11	CARBON	3.3K	5% 1/4W	
R8521	1-215-423-00	METAL	1.2K	1% 1/4W	
R8522	1-215-423-00	METAL	1.2K	1% 1/4W	
R8525	1-215-385-00	METAL	33	1% 1/4W	
R8526	1-249-389-11	CARBON	4.7	5% 1/4W	F
R8527	1-249-421-11	CARBON	2.2K	5% 1/4W	
R8528	1-249-389-11	CARBON	4.7	5% 1/4W	F
R8529	1-249-421-11	CARBON	2.2K	5% 1/4W	
R8531	1-249-429-11	CARBON	10K	5% 1/4W	
R8532	1-215-461-00	METAL	47K	1% 1/4W	
R8533	1-215-461-00	METAL	47K	1% 1/4W	
R8534	1-215-385-00	METAL	33	1% 1/4W	
R8535	1-247-843-11	CARBON	3.3K	5% 1/4W	
R8536	1-215-421-00	METAL	1K	1% 1/4W	
R8537	1-215-421-00	METAL	1K	1% 1/4W	
R8538	1-249-429-11	CARBON	10K	5% 1/4W	
R8539	1-249-429-11	CARBON	10K	5% 1/4W	
R8540	1-247-889-00	CARBON	270K	5% 1/4W	
R8544	1-215-443-00	METAL	8.2K	1% 1/4W	
R8545	1-215-445-00	METAL	10K	1% 1/4W	
**********					
*	A-1390-762-A	TA BOARD, COMPLETE			
		**********			
		<CONNECTOR>			
CN9501*	1-564-518-11	PLUG, CONNECTOR 3P			
		<SWITCH>			
S9501	1-771-275-11	SWITCH, MICRO (LAMP COVER)			
**********					
*	A-1390-763-A	TB BOARD, COMPLETE			
		**********			
		<CONNECTOR>			
CN9551*	1-564-518-11	PLUG, CONNECTOR 3P			
		<SWITCH>			
S9551	1-570-245-11	SWITCH, MICRO (FILTER COVER)			
**********					

The components identified by shading and mark ⚠ are critical for safety. Replace only with part number specified.

Les composants identifiés per un tramé et une marque ⚠ sont critiques pour la sécurité. Ne les remplacer que par une piéce portant le numéro spécifié.

REF.NO.	PART NO.	DESCRIPTION	REMARK
		MISCELLANEOUS	
		**********	
⚠	1-251-662-11	INLET, AC 3P(WITH NOISE FILTE)	
⚠	1-473-545-13	POWER BLOCK	
⚠*	1-475-523-11	OPTICAL UNIT (W9000)	
	1-505-207-11	SPEAKER (5.7CM)	
	1-505-208-11	SPEAKER (10CM)	
⚠	1-533-746-11	THERMOSTAT	
	1-543-653-11	CORE ASSY, BEAD(DIVISION TYPE)	
	1-543-982-11	CORE, FERRITE	
	1-698-696-11	FAN, DC	
⚠	1-475-523-21	OPTICAL UNIT (W7000)	
		REMOTE COMMANDER	
		**********	
	1-475-384-11	REMOTE COMMANDER (RM-Y980)	

Sony Corporation
Display Company
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Service Promotion Section

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